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SCHOLASTIC, ECONOMIC, AND
SOCIAL BACKGROUNDS OF
UNEMPLOYED YOUTH

BY

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PSYCHO-EDUCATIONAL CLINIC

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PREFACE AND ACKNOWLEDGMENTS

The National Youth Administration of Massachusetts, E. L. Casey, Director, provided clerical assistance for the completion of this study, which was begun under the direction of the Harvard Professors' Committee on Unemployment Studies for the Massachusetts State Department of Public Welfare. The Committee is composed of E. B. Wilson, Professor of Vital Statistics; John D. Black, Professor of Economics; G. P. Hamlin, Jr., of Boston, R. Conant, former Massachusetts Commissioner of Public Welfare; Dr. C. C. Zimmerman, Associate Professor of Sociology, is chairman of the Committee.

This investigation has been made possible through the cooperation of the staff of the Harvard Growth Study, and access to the files of this twelve-year investigation of the mental and physical growth of school children has given the study such significance as it may have.

Professor C. C. Zimmerman has sponsored the project throughout and has made many valuable suggestions. Professor P. J. Rulon has advised us on procedures when requests were made. Dr. J. C. Flanagan planned the study in its early stages and is responsible for getting in a large percentage of questionnaire returns. Valuable suggestions have been received from many persons who were interested in the study of youth. The workers secured through the Federal Emergency Relief Administration and National Youth Administration have worked up to their ability in excellent manner. The work of Margaret Mahoney and Edward I. Moss has been exceptionally good.

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SCHOLASTIC, ECONOMIC, AND SOCIAL BACK-
GROUNDS OF UNEMPLOYED YOUTH

CHAPTER I

INTRODUCTION

During periods of economic depression one of the most widely discussed subjects is that of unemployment among youth. The numbers of unemployed youth, the characteristics of the groups affected, their attitudes toward existing conditions, and their possibilities of regaining what has been lost during periods of idleness are the subjects of consideration by press and public, lay and academic. Yet when investigation is made of these subjects of discussion at the present time, two facts are noted. The first is that we do not know how many unemployed youth there are in the country, and the second is that we know very little about those who are unemployed.

Studebaker¹ (1935), Commissioner of Education for the United States, informed us that he did not know how many young people were without work in 1935. He estimated that of the 22,000,000 young people between the ages of sixteen and twenty-five in the United States in 1935 about three million were lacking in constructive activity, but he reminded us that this number was only an estimate, and he called our attention to the fact that all the estimates so far obtained are unsatisfactory. No two of the many estimates of the number of unemployed persons between the ages of sixteen and twenty-five agree upon the number, and the range of estimates extends from three to five millions.

But if there is uncertainty about the number of unemployed youth, there is still greater uncertainty about their characteristics. Notwithstanding the volumes of vague generalizations and huge quantities of propaganda, we do not know whether the fit and unfit alike are without employment. Nor do we know whether or not there are certain personal traits, certain

¹ Citations are to references in the bibliography, which are arranged in alphabetical order under the authors' names

backgrounds, and certain histories that predispose one individual more than another to be without employment when there are not jobs enough for all.

Certainly, if unemployment falls upon the worthy and unworthy alike, we ought to know it. If there are individuals who lack employment because they have not been adequately prepared for employment, we ought to know that fact, too. And if there are certain backgrounds, certain histories, certain conditions which predetermine unemployment, we should know what they are.

The investigation of the backgrounds of unemployment of several million youth in the United States today leads to the problem of finding the answers to such questions as these. What are the characteristics, sociological, psychological, anthropological, educational, and economic of the unemployed youth? Are the brightest, most ambitious and best educated — the best achievers — the best attending and least tardy in school, the persons who are most likely to be selected by employers? What is the relationship between extent of participation in school extracurricular activities and present employment status? What racial factors are operating? Do the youths want to work? How do they go about getting jobs, and which methods are most successful? What are the differences in attitude between employed and unemployed toward their employment status, existing conditions, and education? How soon and how well can future employment and employment status be predicted in the youth's scholastic career?

An opportunity to seek the answers to these questions and many others was presented when a federal grant under the F.E.R.A. and N.Y.A. made it possible to secure workers to aid in the analysis of the scholastic backgrounds of some fourteen hundred young men and women whose mental and physical development had been recorded for twelve years by the staff of the Harvard Growth Study (see section 3 of this chapter). The grant also made possible the analysis of these young people's responses to a questionnaire concerning employment

status, attitudes toward employment, and existing conditions and education.

It is proposed, in the study reported herewith, to set forth the results of such analyses and to present here at least tentative answers to the questions presented above. In order to show what results have been obtained from previous investigations into the backgrounds of unemployment, the next section will be given over to a study of reports of such investigations.

Some Representative Investigations of Unemployed Youth

A review of the recent literature on the subject of unemployed youth reveals that it falls into several distinct categories. Among the studies, the conclusions of which are described briefly in the following pages, will be observed those (Thorndike, 1934) in which an effort has been made to ascertain facts before generalizations are made. In such studies detailed reports of findings are given. Among the studies, too, are a great many in which the writers have drawn generalizations from experience in working with unemployed groups (Fedder, 1935, and Rothney, 1935) but have not reported complete data from which the generalizations were deduced. Still another type of study is that by Minehan (1935), in which the author has become acquainted with unemployed youth and has gathered some data but has not analyzed it as completely as possible, so that the report is descriptive only. Pratt's (1933) and Groves's (1935) statements included here are made by scientists concerning a subject which is much discussed, namely, the mental hygiene aspect of the employment situation. Lang's (1935) and Beckman's (1933) studies concern the effect of a period of unemployment upon the individual when he is again given the opportunity to work.

The studies reported on the following pages may then be considered as types drawn from wide samplings of studies. No attempt has been made to report all the literature upon employment, for that would require a volume, and no consideration has been given to those great quantities of literature in which

are expressed in expert viewpoints unaccompanied by experimental evidence. The history of unemployment and studies of the causes of unemployment have not been included.

One of the most comprehensive studies that has been made of the vocational success of a group of young people was reported by Thorndike in 1934. He was commissioned by the Commonwealth Fund in 1921 to investigate the possibilities of guidance at about age fourteen on the basis of items found in the kind of records kept by nearly all school systems, and such psychological tests as could be safely and conveniently administered by a school principal, Y.M.C.A. secretary, employment manager, or reliable individual of like standing. Thorndike secured school records for over 2,000 children at ages thirteen to fifteen and obtained their scores on general intelligence, clerical capacity, and mechanical aptitude tests administered in 1921 and 1922.

Although Thorndike's investigation was not concerned primarily with the study of unemployed youth, some of his findings are of considerable significance to us, since they deal with factors which have been studied in our investigation. Among Thorndike's findings may be noted the following statements:

Infrequency of change of employer cannot be trusted as evidence of vocational success. Its correlations with earning, level of job, and liking for job were only .15, .08, and .09 at ages 20.0 to 22.0, and only .11, .04, and .09 at age 18.0 to 20.0. Those who change their employers oftenest earn almost as much and like their work about as much as those who remain with the same employer through the entire four years.

Parental status has had little influence upon vocational success to date, but will probably show more when the influence of beginning work early has faded out, and when the college group can be included. The children of clergymen, lawyers, physicians, and the like are more successful in school and in the tests. They stay longer in school than the children of unskilled laborers, but earn no more at age 18.0 to 22.0. They have positions of a little higher level and like their jobs a little bit better.

There is much indirect evidence that employers do not fit wages to services very accurately in the case of young workers. Direct evidence also appears in the fact that *they pay substantial premiums for mere size in the case of clerical workers.*

Apparently the only persons who make any larger financial gain by choosing mechanical work are the dull, especially the very dull, boys

One or two children in a hundred from our group became criminals or loafers *These were inferior at age 14 0 in all respects.* Here for the first time we find significance in the school records of conduct and attendance.

In clerical activity, school conduct marks and school attendance have no predictive value. In mechanical or manual work, high marks for conduct in school and regularity of attendance have zero value, as they have for success at clerical

The picture our records show is just the reverse of restless youth trying one job after another and being satisfied at none If these young people err it is by being inert, and too easily satisfied. If their employers err, it is by retaining workers whom they might supplant by better ones.

Braddock (1935) characterizes the study from which the above quotations are selected as one demanding continuity of method and tools which were not available at the time the study was made. He states that the conclusions are vitiated by the neglect of human factors and hence is a record of patient labor rather than a classic on predictability. Thorndike (1935, "Rebounds") replied to his critics by pointing out that it would be more profitable for those concerned with vocational guidance to consider the various significant facts of his findings rather than to debate the propriety of his statements about vocational guidance.

Wooley (1926) presents detailed data concerning the differences between children who were in school at ages fourteen to eighteen and those who were working at the same ages. She secured physical measurements (height, weight, vital capacity, and motor coordination), mental measurements (cancellation,

memory, sentence completion, etc., and scores on the Yerkes Point Scale), measures of social status of the families, and rating of home conditions, of 753 children who left school to go to work and 760 children who intended to remain in school after age fourteen. Industrial histories were secured from the working groups.

In the summary of her work, which is presented in 762 pages of detailed analyses and descriptions, Wooley finds:

In the realm of physical tests we found the school child superior to the working child at every age from fourteen to eighteen. The differences, however, were considerably greater at fourteen, than at eighteen. Roughly stated, at fourteen, one-fifth of the working group equaled or excelled the median of the school group, while at eighteen, one-fourth of the working boys and four-tenths of the working girls equaled or excelled the median of the school group. . . .

In height and weight, school boys were very superior at fourteen years and much less superior at eighteen years, while school girls did not at any age differ radically from working girls in these measures . . .

Left-handedness proved to be greater among working than among school groups of both sexes. . . .

School children proved to be superior to working children in every test made. Furthermore, the differences in mental test levels were much greater at eighteen years than they had been at fourteen years. In round numbers, at fourteen years, one-fourth of the working children equaled or excelled the median of the school children, and at eighteen years only one-tenth

Tests which showed the greatest superiority of school children were those in which both logical thinking and a good command of language played an important part, such as association by opposites, mutilated text, and hard directions.

In the physical series it was very evident that school boys completed their years of rapid growth both in size and in skill earlier than working boys by from one to two years. The spurt of adolescent growth ended for school boys at sixteen and for working boys at seventeen.

Though there is some indication that the school children finished their spurt of adolescent mental growth earlier than the working children, there is also proof that they continued to gain slowly from year to year longer than the working children. . .

The few measures which made possible a comparison of working and school children on the basis of social and economic status showed a superiority of the school group in this realm also. School children had fewer foreign-born parents than working children. They had fewer mothers who worked outside of the home. Their families occupied a somewhat greater number of rooms per family. The visits to homes of school children, which were in the same neighborhoods as those of the working series, showed also a slight superiority to the homes of working children. . . .

The striking fact is that there was so little relationship of any sort between ability as measured by the tests and industrial factors. Superiority in physical skill in the case of boys was a real factor in wage-earning capacity. All of the other correlations were so near zero as to indicate little relationship of any sort. On the whole, what correlation there was with the industrial factors was slightly positive for the boys and slightly negative for the girls. In other words, there was a slight advantage in wage-earning and in regularity of employment for superior boys and for inferior girls.

Wooley's study was completed in 1922. Since that time great progress has been made in the measurement of the items she considered. The study presents some interesting material, even though we are given no measures of the significance of the results.

Rousse (1931) worked with the school records of graduates of the classes of 1927, 1928, and 1929 of the Alternate Week Coöperative Course of the Boston High School of Practical Arts, and of the Daily Coöperative Store Training Course of Roxbury, Massachusetts, Memorial High School for girls. The records included academic ratings in addition to ratings on conduct, application, and reliability. Attendance records, tardiness records, and intelligence test scores were also obtained.

Rousse found that records of attendance and intelligence test scores were of little value in predicting job-holding capacity. Punctuality records and ratings on application, reliability, and academic performance were of considerable value in predicting survival value in industry. The results of Rousse's study indicated that in general the school's judgment of pupils is reasonably accurate and that graduates usually maintain a level of accomplishment commensurate with their school records.

At the University of Minnesota Employment Stabilization Research Institute a number of studies of considerable significance for our understanding of employment problems are being carried out. Among these are the studies of Bloodworth, Trabue, Dvorak, and of Darley and Patterson, the results of which are given below.

Bloodworth (1932) gave vocational aptitude tests and complete medical examinations and secured social agency and complete occupational histories of 2,100 unemployed individuals who had come to the Occupational Analysis Clinic at the University of Minnesota. Guidance and special training were offered to each individual, and a year later, in response to a request 26 per cent of the subjects selected at random came to the clinic for a second interview or replied concerning their employment status by letter.

Bloodworth's findings show a courageous, but slowly losing fight against dependency. Thirty-nine per cent of the group had found work in keeping with their training and experience; 25 per cent had accepted work of lower occupational level; and 36 per cent had found work on the same general occupational level, but of an entirely different type from that for which they were trained. Most of the group were passing through periods in which they had lost their savings, borrowed up to the limit from insurance and relatives, moved in to be supported by relatives, and finally turned to organized relief.

Trabue (1933) examined the academic abilities of 282 unemployed persons in Minneapolis who had graduated from high school but had taken no additional training. He found that

1 per cent had fifth-grade, 2 per cent sixth-grade, 3 per cent seventh-grade, and 6 per cent eighth-grade ability.

At the Employment Stabilization Institute of the University of Minnesota (Dvorak, 1935) a standard battery of tests was administered to eighteen occupational groups. The relation between particular occupational ability patterns, the degrees of success within the occupation, and the factors at the basis of differential occupational ability patterns were analyzed. It was found that individuals from a given occupational group can be differentiated from the general population and from different occupational groups on the basis of certain tests. Dvorak states that a comparison between the ability profile of a subject seeking guidance and the ability profile of a given occupation, expressed in the same terms, will give indication of probable success in the field.

A test battery, consisting of the Minnesota Mechanical Assembly, Minnesota Spatial Relations, Minnesota Manual Dexterity, O'Connor Finger Dexterity, O'Connor Tweezer Dexterity, Minnesota Number Checking, Minnesota Name Checking, Pressey Classification, and Pressey Verification Tests, was used in Dvorak's study. Physical tests were administered also. The test records indicate that early unemployed do less well on occupational tests than late unemployed or employed. Physical defects likely to affect efficiency are more prevalent among unemployed than among employed workers. Unemployment is found to be inversely related to length of time at the usual occupation and also inversely related to length of time at the last job. Technological change is a relatively unimportant factor in these data.

In Allegheny County in Pennsylvania an investigation (Cleeton, 1935) revealed that "any marked movement toward re-employment, occupational adjustment, going far beyond job finding and placement, will become necessary for about 60% of the persons now unemployed." During the Allegheny investigation an analysis was made of the individual abilities and traits of 1,001 students in eight schools. It was found that the

greatest service in educational and vocational guidance could be rendered by assisting organizations which offer courses for adults, in the classification and placement of students in courses suited to individual interests and abilities; by assisting these adults in the selection of suitable vocations; by advising these persons on training programs to fit them for suitable occupations; and by advising the institution and the individual on problems of emotional adjustment. Objective evidence upon which to base advice was obtained through use of personal history form, mental tests, vocational interest check list, and personality trait questionnaires. In most cases individual reports were prepared which contained specific recommendations to be conveyed to the persons concerned. The data reported by Cleeton include characteristics of the experimental group, tests and measuring devices used, and tables showing the range of vocational interests of men and women. Experience with the Allegheny project clearly revealed a need for a publicly supported occupational adjustment bureau to which adults might apply for advice and assistance in the solution of personal problems relating to vocational selection and training.

Several studies of the transient groups among the unemployed have appeared in the literature recently and are worthy of consideration here because they deal with groups who have been driven into their present status largely because they have failed to secure employment. The first of these, by Minehan, is perhaps the most significant.

The reasons given by the young tramps for leaving home are reported by Minehan (1932). He finds that of a group of 489 subjects, 79 per cent gave hard times as the reason for leaving home, 5 per cent of the boys had had trouble with girls; 6 per cent liked to travel, 4 per cent hated high school; 2 per cent left school to get married; and the remaining 4 per cent of the group gave various other reasons.

The amount of education received by another transient group composed of 326 cases was obtained by Minehan. He reports

that 14 per cent had had less than fourth-grade schooling, 23 per cent had more than four but less than six grades; 47 per cent were graduates of grammar schools; 8 per cent had finished grammar school but had less than two years of high school; 5 per cent had entered college but had stayed less than two years; 2 per cent had more than two years of college but had not graduated; and less than 1 per cent were college graduates.

A study of the extent of participation in scout, Sunday school, and club work of a group of 413 subjects (397 boys, 16 girls) revealed that 55 per cent reported no participation in such activities. Eighteen per cent reported Sunday school attendance only.

Minehan completed his picture of the boy and girl tramps by describing the activities of the group of wanderers. He pointed out that desirable impulses are slowly but surely routed to be replaced with a pride in the knowledge of the tricks of begging and finally of stealing. Discussion turns from sports to unemployment, communism, the workers' revolution, sex, and religion.

Outland (1934), who has dealt with some five thousand transient boys between the ages of fifteen and twenty registered at the Central Intake Bureau of the Transient Service of the F.E.R.A. in Los Angeles, found that of the five thousand boys interviewed less than 1 per cent had gone as far as the eighth grade and only 15 per cent had finished high school. He found that in the main these boys were not the tramps they were considered to be, but earnest young fellows who had lost their jobs through economic circumstances beyond their control, who were extremely anxious to rehabilitate themselves, and who were eager to work.

In a study of a group of transients registered at the Transient Center in Buffalo, Schubert (1935) found that, while in the main these people had been unsuccessful in their academic pursuits, they were, on the basis of their rate of progress

through school, able to do professional or semiprofessional work. He estimates that 40 per cent (6,400) might do creditable work in high-grade clerical or skilled trade jobs.

Engle (1934), who made a study of the home environments and school records of 345 pupils, concluded that in school marks and intelligence children from financially dependent homes have less favorable school records than children from homes selected at random, and children from homes selected at random have in turn less favorable school records than children from selected privileged homes

Fedder (1935), who has watched for four years the slow disintegration of girls' personalities under the depression, while dealing with unemployed girls at the Young Women's Christian Association, pleads for the recognition of the fact that the "youth problem" is one for the girl as well as for the man — a fact that is overlooked quite frequently in discussions of unemployed youth.

Fedder sums up her description of unemployed girls as follows:

As one listens to these conversations of unemployed girls, one arrives at the conviction that the danger in a group of unemployed youth like this, so numerous throughout the country, is not so much that they will start a revolution, as that they will eventually become unemployable community charges. At first, they do rebel. Then gradually they adjust to whatever circumstances befall. They disintegrate — stagnate intellectually, emotionally, and morally. A few eventually become adjusted in a job or in marriage; the others may go insane, commit suicide, embark on a criminal career, become prostitutes, or drift aimlessly.

Rothney (1935, *Motivation*) has described the attitudes of a group of unemployed youth toward education. He has shown that although students who were attending an emergency junior college were offered no degrees or credits, no college social life, little prestige, little in the way of high-powered athletic or social programs, and were not compelled by parents to attend the college, they were anxious to secure further educa-

tion, and they set out to secure it even under adverse circumstances. Rothney concludes that young people have not lost their moral fiber or intellectual curiosity even though they have not been able to secure the employment and educational opportunities they wished. In another statement (1935) he shows that the mean of the intelligence test scores of this group of unemployed who had taken advantage of the educational opportunity offered to them was equivalent to the mean scores made by students of several universities.

Approximately half a million unemployed boys have been enrolled since 1932 in the Civilian Conservation Corps (CCC) which were organized to provide a camp home and job for those youths who had not secured employment in private industry. Hitchcock (1935) describes the enrollees in one of the camps which can be considered as representative. The average age of the enrollees was eighteen and the range from eighteen to twenty-five. Hitchcock goes on to describe their previous schooling and occupational training as follows:

During the past several months 7 per cent of the men enlisted in the New England camps had had no previous schooling, whereas 44.9 per cent had completed only the eighth grade or less. A fair percentage had attended high school; some have graduated, and an occasional man has had some college training. Some are products of evening schools, state institutions, and trade schools.

The occupational background of the enrollees formerly employed is conspicuous for the lack of valuable experience. When employed, the men have been laborers, and naturally they have been the first to lose their jobs. The places which many of the men held never promise advancement, and the workers' potentialities far transcend the positions they have held. Those who have been employed for several years have worked at many different occupations without striking the right one. The men who have worked, as well as those who have never been employed, come to the camps when they have no place to turn for a living. They are at the end of their resources. They do not know what they really want to do, nor where to look for employment.

Marsh (1935) in a brief statement discussed the men who were selected to instruct the enrollees described by Hitchcock. Both Marsh and Hitchcock consider the educational work among the CCC enrollees boundless in its possibilities and significant in its contribution

A study of the occupational choices made by some ten thousand school boys between the ages of nine to eighteen years reported by Lehman and Witty (1934) showed a negligible correlation with the number of workers now engaged in the 138 occupations which they list. Avoiding those occupations which include fewer workers and those which lack prestige or high salary, the boys expect to enter occupations which are already overcrowded. The authors state that there is a need for vocational guidance based on "intelligent, economic planning."

Thorndike (1934) reports that only 10 per cent of a group of 1,140 employed boys and girls, ages eighteen to twenty-two, dislike their work. He finds that those engaged in clerical work like their jobs better than those engaged in mechanical work, and that girls reported greater liking than boys, regardless of the nature of work.

Although we have been considering here only factors of ability and interest in vocational success, it is well to consider the place of purely chance factors in success which may lie quite outside the individual himself. Hull (1928, p. 193) summarizes a discussion of determiners of achievements in education and vocation by estimating that ability, industry, and chance contribute 50 per cent, 35 per cent, and 15 per cent, respectively, to the attainment of success.

Charters (1925) has discussed the relationship of personality and intelligence to success in school and in industry. He states that too much stress is put on intellectual ability by university people and illustrates the effect of stressing ability and ignoring other factors which are determiners of success in employment. He states that the bright man is no more likely to make a good salesman than one less bright. Character, personality, sociability, social forcefulness, and interest in the job should be given

more consideration in the study of students' performances. Charter states:

We of the classroom, are inclined to feel sorry for the industrious child with a comparatively low mental score, who by dint of hard work keeps abreast of his class. "Isn't it unfortunate that he is not bright?" we say

We should rather say, "Isn't it fortunate that he is so industrious, ambitious and friendly?"

Charters' statements of the case are, however, not encumbered by data to support his view

May (1935) points out that the nominal sequence of events in the life career of American boys is: school (at ages six to eighteen), employment (the first job at ages sixteen to twenty), marriage and a new family. The same sequence is followed by girls except that employment is not a requisite to marriage. Any breaking of this culture pattern is certain, Professor May believes, to have consequences of major significance. He thinks that such a break has already occurred, with three to five million young men and women from ages sixteen to twenty-five out of school, unmarried, and unemployed. The effect on the individual of such breaks is noted in the following studies.

The finding that some unemployed become as downcast as mental patients with a negative and catastrophic outlook is reported by Israeli (1935). His findings were obtained by interview rating forms, aimed to measure the outlook on the future of both mental patients and unemployed. Israeli believes that a closer study of the relation between the mental patterns of the unemployed and of downcast mental patients should throw light on the nature of differences between normal and abnormal reactions and attitudes.

Beckman's study (1933) of forty stenographers who had held high secretarial and clerical positions and who had been without employment for a year showed that one third of her subjects needed two to three weeks to regain the self-confidence and competency lost during their period of unemployment. During the time that these people were getting readjusted to

employment their behavior indicated that some had developed fears ranging from uneasiness to object-terror. Some were suffering from feelings of inferiority, and others attempted to escape reality through alcohol, suicide, or shut-in personalities during their idle periods.

Lang (1935) reports that five years of limited employment opportunity have created conditions of a serious nature for those workers and employers whose fields of activity now show indications of improvement. The loss of opportunity to use the skill possessed in earlier years has led to a loss of the skill itself and has forced many to forget their former occupation. Further, habits of inertia growing out of a long period of unemployment have reduced the occupational fitness of many workers. Lang states that the social and emotional maladjustment of previously acceptable workers has progressed to the point where many are unemployable.

Groves (1935) tells us that the effects of the depression on individual families are largely determined by the fundamental characteristics of each family prior to its economic collapse. He finds trends toward family demoralization and also toward a record of family unity and loyalty. The first trend was indicated by increased tension, desertions, drinking, vice, and mental abnormality, and the second by sacrifice, more use of the home, and a wiser philosophy of living. He finds, also, the nearly universal conviction that direct relief has hurt family life because newspaper publications and propaganda have led to great expectations, which, unfulfilled, have encouraged feelings of despair. Groves states that these influences operating upon children in youth have been especially significant.

Pratt (1933) presents no data to support his conclusions, but his statement from the mental hygiene point of view is of considerable interest. He states:

Additional family problems of mental hygiene created by present economic conditions are found in adolescent boys and girls just out of high school and college. Eager to live their

own lives, trying to complete the wholesome process of emancipating themselves from childish emotional dependency on their parents by experiencing the freedom of independent accomplishment, and seeking that security which comes from a realization that one is needed in the world, they look in vain for work. In all too many cases these youngsters (particularly the boys) react to such thwarting by leaving home and joining the growing army of aimless drifters from town to town, or what may be even worse, in some instances they remain at home with nothing to do but add to their irritability (arising from frustration and a quite unwarranted feeling of guilt at not being able to assume their share of economic responsibility) and the irritability of others in the family until home life becomes a nightmare to everyone. In either case personality patterns characterized by chronic discouragement, a bitter cynicism, or by rebellion may be formed to remain throughout life.

Examination of the results of the studies reported above reveals that previous investigators have not provided us with adequate descriptions of the backgrounds of unemployment because the data which they used were gathered at the time of the investigation — after backgrounds were obscured by the factors of faulty memory, imagination, probable deliberate attempts to mislead investigators, and by interpretations of past conditions in terms of present situations. Further examinations disclose also the lack of adequate samplings of unemployed populations, lack of objective measurement, and incomplete descriptions of the individuals studied.

The results of the previous investigations are inadequate in giving us a complete picture of the unemployed persons as contrasted with those who are employed. There is need, therefore, of a more complete and more thorough investigation of such groups, and it is our purpose in this volume to report the results of an investigation in which an attempt has been made to meet more adequately than any previous study the criteria of completeness and thoroughness. In the following section the sources of data for our investigation are described.

The Harvard Growth Study

As stated in the introduction, most of the raw data for our study were taken from the files of the Harvard Growth Study, begun under the direction of Professor Walter F. Dearborn of Harvard University in 1922 and continued for a twelve-year period. During the first two years the work was carried on with the aid of grants from the Commonwealth Fund. From 1924 to 1930 it was supported entirely from the funds of the Harvard Graduate School of Education, and since that time (until 1934) by grants from the General Education Board.

The general purpose of the study has been described by Dearborn (1924), as follows:

Repeated measurements of physical growth have disclosed facts which previous comparisons in terms of the average of different age groups had missed. The extent to which individuals maintain throughout the period of growth their initial superiority or inferiority in physical stature, weight, etc., has been graphically shown by the studies of Cameron, Wissler, and Baldwin. So, too, the most significant result from the repeated application of mental tests to the same individuals has been the demonstration of the relative constancy of the intelligence quotient under similar conditions of environment and training.

The above cited studies have, for the most part, dealt with a single measure or criterion of development. For further analysis of growth, a combination of these tests, physical or physiological, mental and scholastic, needs to be applied to the same individuals at regular intervals during their growth. We may then differentiate more clearly than is now possible the relative influence of endowment, maturity, and training in the development of the individual and thus rest the diagnosis and prognosis of problematical cases on a securer basis.

In the present investigation it is proposed to determine not only differences but the changes which appear in the physical, mental, and scholastic attainments of children during the period of growth.

Dearborn (1935), in a more recent statement, describes the progress of the study, as follows:

The main experimental group comprised the entire first-grade population in three small cities, together with some second-grade children who happened to be in the same rooms with the first-grade children — over three thousand children in all. These same children, or as many of them as have remained in these school systems, have been remeasured annually at the same time of day. In the twelfth year, measurements were made of approximately 1,700 children, but this number includes some cases which were added to the lists during the early years of the investigation. Contact has been kept with some 650 pupils² who have dropped out of school and a part of the annual measurements have also been made of them.

The main group is largely of North European stock. In one of the cities, however, there are about equal numbers of Jews, Italians, and North Europeans, which may make certain comparisons possible. Whether they can be considered racial may, of course, be questioned.

Upon all these individuals the following tests and measures have been applied, first, physical and physiological. The measurements now taken are standing height, porion height, height at the sternal notch, sitting height, weight, chest width, chest depth and iliac diameter. Head width and head length were taken in alternate years. Account was also made of each child's deciduous and permanent teeth and an X-ray photograph taken of his carpal bones.

At least two group intelligence tests have been administered each year. Nearly every child has had at least three individual tests during the twelve years and the majority have had more. Several of these children, chiefly those who were retarded in school, have been examined by other agencies. Their findings are being added to our records.

The scholastic achievement was first judged by tests of reading and arithmetic. With advance in grade, an increasingly complex battery of tests of accomplishment was required. Tests in as many as a dozen different subjects of study are made in the later years as a means of estimating each individual's scholastic progress.

In addition to the records mentioned by Dearborn, data were gathered on the Growth Study subjects concerning their extracurricular activities (offices held, sports and club mem-

² Increased in the present investigation by 1,360 subjects

bership) carried on during their junior and senior high school levels, as were also data concerning the work done outside of school during their period of attendance at school.

Records of school marks, attendance and tardiness, highest grade reached, number of years in school, and reasons for leaving school were secured for each child. Ratings on fifteen personality characteristics made by the first-grade teachers complete the records of the Harvard Growth Study.

Opportunities for Research Offered by the Harvard Growth Study

An examination of the items of information obtained in the twelve years of the Harvard Growth Study reveals that information was gathered on twenty-six sociological, seventeen psychological, twenty-four educational, twenty-three anthropological, and three medical items.³ Not all of these items have been kept for the twelve-year period. Several of them were added or dropped after the study was begun, and several (such as the advent of puberty) were applicable to certain age groups only. Most items have, however, been retained over the twelve-year period.

It is this wealth of data that we have been privileged to draw from and add to in our investigation. The data are unique. None of the various Growth Studies preceding or following the Harvard Growth Study has been so comprehensive, none has had such an adequate or representative sample of the child population of the country over such a lengthy period of time, and none yet offers such possibilities of producing much-needed information on the nature of child growth and development. The opportunities for research in child development offered by the data are so many and so varied that difficulty is met with in the isolation of particular sections for study. For our present purpose it was necessary to select from the material available only that which appeared to be most pertinent to our study of un-

³ In addition to the above, ten economic items were added in the course of the present investigation.

employed youth. Seventy-four items of information about each of our subjects which have been taken from the Growth Study records are considered in this study.

We have shown in a previous section that the results of other investigations, owing to any of the several limitations mentioned, have not given us a great deal of significant information concerning the scholastic and developmental backgrounds of unemployment, nor have they given us much that is of value in describing the sociological, psychological, educational, and physical characteristics of the unemployed as contrasted with employed youth.

It was the purpose of this investigation to seek, and it is the purpose of this report to present, our findings concerning the characteristics of representative samplings of unemployed youth and to describe the scholastic backgrounds of such groups. In the following chapter we shall describe certain characteristics of the subjects of our study

CHAPTER II

THE EXPERIMENTAL GROUP

Selection of Subjects — Age, Sex, School Entrance

The subjects of our investigation were selected from the cases in the files of the Harvard Growth Study described in the previous chapter. In order to get a representative sampling of the young men and women in this section of the country (New England), those students who were in the first grade of the schools of two cities, who had been measured in the first year of the Growth Study (1922), and whose addresses were known, were selected for study. (The average chronological age of the subjects of the experimental group in November 1935 was twenty years and eleven months. The range extended from seventeen years and eight months to twenty-three years and six months, with the sigma at eighteen months.)

Fifteen hundred forty-one subjects whose addresses were correctly determined met the criteria of selection. Of this number 1,360 or 88 per cent, responded to the questionnaire which is described in the following chapter. Fifty-two per cent were girls and 48 per cent were boys. This group of 1,360 young people composed the population of our investigation and will hereafter be called the "Experimental Group."

The Locale of the Experiment

The cities in which the experiment was conducted may be best described by comparing them on the basis of socio-economic level with the state of Massachusetts, in which the cities are located, and with the United States as a whole. A procedure for making such a comparison has been devised by Rulon (1933). He uses a modification of the Minnesota Child Welfare Occupational Classification Scale (Goodenough, 1928), which is essentially a classification of the United States census occu-

pational listings into seven groups in descending order of average socio-economic status of people engaged therein. The modification devised by Rulon makes certain additions to Goodenough's Minnesota Scale, so that occupational groups found in Massachusetts, but not in Minnesota, can be classified.

To reduce the Occupational Classification Scale to equal units Rulon utilizes a procedure devised by Kelley (1923, p. 101). The values assigned by this procedure to each occupational group for the United States as a whole, the state of Massachusetts, and the two cities from which the subjects of this investigation were drawn, on the basis of the 1930 census,¹ were found to be as follows:

Occupational Classification		United States α Values	Massa- chusetts α Values	City X α Values	City Y α Values
Group I	Professional	+2.115	+2.050	+2.022	+2.185
Group II	Semiprofessional	+1.514	+1.415	+1.255	+1.609
Group III	Clerical, skilled trades, retail busi- ness	+1.002	+ .843	+ .574	+ .856
Group IV	Farming	+ .531	+ .495	+ .221	+ .412
Group V	Semiskilled, minor clerical, and minor business	— .088	— .186	— .399	— .360
Group VI	Slightly skilled trade	— .737	— 1.09	— 1.355	— 1.332
Group VII	Day laborers	— 1.485	— 1.774	— 2.007	— 1.964
Mean α values				+ .044	+ .201

The averages of the α values were taken as figures descriptive of the socio-economic level of the geographic areas. The score for the first city was plus 0.044, and for the second, plus 0.201. As a plus score indicates superiority of the city to the United States as a whole and also to the state of Massachusetts, it will be noted that our cities are somewhat above the average for the United States in occupational classification of residents, and that one of the cities was representative of the cities

¹ Rulon's figures are based on the 1920 census returns.

of Massachusetts, while the other was considerably below the Massachusetts average.

The indices given in the preceding paragraph describe the general socio-economic levels of the communities. Data were available in the Growth Study files, however, which made it possible to note the particular occupational status of the father and, inferentially, the socio-economic status of the home of each child in our investigation. In Table 1 we have listed the percentages of fathers of the members of the experimental group and the percentages of workers in each of the occupational classifications in the state of Massachusetts and the United States as a whole. The figures show that the subjects of our

TABLE 1

PERCENTAGE OF FATHERS OF THE SUBJECTS OF THE EXPERIMENTAL GROUP IN EACH OF SEVEN OCCUPATIONAL CLASSIFICATIONS AND THE PERCENTAGE OF WORKERS IN EACH CLASSIFICATION IN MASSACHUSETTS AND THE UNITED STATES AS A WHOLE (Census of 1930)

Occupational Group		Per Cent of Fathers of Experimental Group	Per Cent of Population, Massachusetts	Per Cent of Population, United States
Group I	Professional	6.1	5.1	4.4
Group II	Semiprofessional	9.1	5.7	4.4
Group III	Clerical, skilled trades, retail business	34.0	19.6	14.8
Group IV	Farming	1.2	1.3	12.5
Group V	Semiskilled, minor clerical, and minor business	37.8	50.0	34.6
Group VI	Slightly skilled trade	6.8	8.7	12.2
Group VII	Day laborers	5.0	9.6	17.1

investigation were drawn from a group which is fairly representative of both the state and country in which they reside. The chief differences between the occupations of the fathers of the members of the experimental group and those of workers in the United States as a whole are to be found in Group IV (farming) and in Group VII (day laborers). The difference in Group IV might be expected, since our subjects were selected

from cities in a state which has a low percentage of farm population. The difference in the population of the day-laborer group is owing to the fact that many of the people who were doing day labor in our communities were working in factories where they had learned enough of a particular skill (in shoe factories, for example) to be grouped with the slightly skilled trades of Group VI.

It is only in Groups III and V that there are significant differences between the occupational status of the fathers of our experimental group and the occupational status of workers in the state of Massachusetts. The differences are due in part to the difficulty of classifying groups into skilled and semi-skilled. They are also partly due to the fact that one of our cities is a suburban city which has often been described as the "bedroom" of Boston. It is in this city that a large group maintain their homes while their business is carried on in the neighboring city.

The difference between the socio-economic level of the members of the experimental group and the socio-economic level of Massachusetts and the United States as a unit is not so great that our cities can, however, be called extremely atypical of the United States. It is reasonable to assume that the findings obtained in this study will be representative of results that would be obtained in other areas (excluding large agricultural areas) of the United States as a whole.

Ethnic Origin

The Harvard Growth Study classification of children according to race is ethnic rather than rigidly anthropological. Whereas an anthropologist's chief criteria are pigmentation, facial features, color and form of hair, body-build, etc., the Harvard Growth Study classification was made upon the basis of birthplace of parents and grandparents, language, name, religion in the case of Jews, and pigmentation, facial features, and form of hair in the case of Negroes. An investigation re-

vealed that differences in basic criteria resulted in surprisingly few differences from a strictly anthropological classification. Estabrooks (1928) found disagreements in only 3 to 4 per cent of the Growth Study children, and the disagreements were found mostly in the cases of the blond Italians and French Canadians.

Examination of Table 2, in which we report the classification of our experimental group on the basis of ethnic origin, reveals that the group is composed largely of North Europeans and Italians. Approximately 7 per cent are Jews South Europeans (other than Italians), mixed, and Negro groups together form only 6 per cent of the experimental group.

Our group of subjects offers little opportunity to study racial differences in employment opportunities and status except in the cases of North Europeans and Italians. If there are significant ethnic group differences in employment status between those of North European and Italian extraction, however, they are likely to be revealed in our investigation.

TABLE 2
CLASSIFICATION OF THE EXPERIMENTAL GROUP ON BASIS OF ETHNIC ORIGIN

Ethnic Origin	Per Cent of Experimental Group
North Europeans	62.6
Italians	24.5
Jews	6.9
South Europeans (other than Italians)	2.3
Negroes	1.6
Mixed	2.1

First-Grade Personality Ratings

While the members of our experimental group were in the first grade of school in 1922, their teachers were asked to rate them on fifteen items concerned with personality traits, scholastic performance, and home backgrounds. A rating card, a sample of which is presented immediately below, was filled out by every teacher for each of her students.

SAMPLE RATING SHEET

To the Teacher Answer as many questions as you can about each pupil by putting a check in the proper column to show whether he is Very Inferior, Inferior, Average, Superior, or Very Superior in each trait, considering his age and school grade

Item	VI	I	Av	S	VS
How intelligent is he?					
Does he get explanations and directions quickly?					
Does he have ability to concentrate?					
How are his habits of work and study?					
How does he do in plays and games?					
Is he cooperative?					
Leadership?					
What is his nervous condition?					
General standing in school work?					
How is his number work?					
How does he do in reading?					
How well does he express himself orally?					
How does he do in hand work?					
Behavior in school?					
Home conditions?					

On this card the teacher was directed to indicate on a five-point scale, ranging from very superior to very inferior, her judgment concerning her pupils' traits and attainments.

Ratings obtained in this manner and made by a number of teachers with varying rating standards were not comparable in their raw-score form. It was necessary, therefore, to devise a method for rendering the ratings comparable. In order to do so, the number of pupils in each teacher's class who were rated in each of the categories was counted. The average rank for each grouping was then computed, the per cent position for the average rank (Hull, 1928, p 238) was obtained, and the corresponding sigma position read from the Kelley-Wood table (Kelley, 1923, p 373). An arbitrary scale was constructed with 5 as the mid point, and zero set on the scale at -3 sigma. Class limits were set as follows:

+2.700 to +3.300
+2.100 to +2.700

+1.500 to +2.100
 +0.900 to +1.500
 +0.300 to +0.900
 -0.300 to +0.300
 -0.900 to -0.900
 -0.900 to -1.500
 -1.500 to -2.100
 -2.100 to -2.700
 -2.700 to -3.300

Scale scores ranging from zero for the lowest class interval to 10 for the highest class interval were then assigned

In order to make clear the procedure it may be necessary to work through the ratings obtained on one of the items. Teacher "X" rates her class of 25 pupils on "leadership" in this manner:

	<u>N</u>
Very Superior	3
Superior	6
Average	9
Inferior	5
Very Inferior	2

Using the procedures outlined above, we get, as shown in Table 3, the scale scores allotted to the five ratings. Reading from the table, we find that if a student is rated with three others as being very superior in a class of 25 he gets a score of 8. If he is rated with one other person as being very inferior in the same group he gets a score of 2.

We have used the ratings of some four thousand pupils by some two hundred teachers and have transmuted the ratings by the method outlined above. A study has been made of the relationships between the ratings, employment status, and several other variables, and the results are reported in Chapter V. In order to test the extent to which teachers tend to

TABLE 3

STEPS IN OBTAINING COMPARABLE SCALE SCORES FROM RATINGS ON A FIVE-POINT SCALE — GROUP OF 25 SUBJECTS

Teacher's Rating	N	Average Rank	Per Cent Position	Class Interval	Scale Score
Very Superior	3	2.0	060	1.555	8
Superior	6	6.5	240	0.772	6
Average	9	14.0	540	0.100	5
Inferior	5	21.0	.820	—0.915	3
Very Inferior	2	24.5	960	—1.751	2

use the various categories in rating their students, a compilation of the number of times that some two hundred teachers had used the various classes in rating some four thousand students on the fifteen items listed above was made, and the percentages were computed. The percentages are as follows:

Percentage of students rated as	Very Superior	2.9
“ “ “ “ “	Superior	11.8
“ “ “ “ “	Average	65.0
“ “ “ “ “	Inferior	16.9
“ “ “ “ “	Very Inferior	3.4

A glance at the percentages reveals that the “Average” category was used most frequently, the “Superior” and “Inferior” categories used less frequently, while the extreme categories “Very Superior” and “Very Inferior” were rarely used. Of the latter two, the “Very Inferior” was used most frequently.

The percentages show in a striking manner what is called “halo” effect, the tendency of teachers to use the average grouping, and the tendency to avoid extreme judgments. Apparently our sample of 200 teachers considers that most of their students are average students, and average, too, in most of the items rated. The tendency to avoid the superior categories is particularly marked.

School Attendance

The average member of our experimental group had, in 1935, attended school for 11.6 years. The range of schooling extended from grade five in the elementary school to the third year of college. In Table 4, which follows, we have reported the percentages of subjects who had reached various scholastic levels in July 1935. Of this group of 1,360 students, 10 per

TABLE 4
PERCENTAGE OF EXPERIMENTAL GROUP WHO HAD COMPLETED VARIOUS
SCHOOL GRADES BY JULY, 1935

Highest School Grade Attended	Per Cent of Experimental Group
Grades I to VI	2 6
Grades VII to IX	14 7
Grade X	8 1
Grade XI	5 6
Grade XII	47 2
First year college	6 4
Second year college	3 4
Third year college	0 7
*First year special school	8 9
*Second year special school	2 4

* Special schools include nurses' training schools, secretarial training schools, short business courses, etc.

cent had completed from one to three years' attendance at college, 11 per cent had attended special schools for one year or more, 47 per cent had completed senior high school, 6 per cent had finished grade eleven, 8 per cent had completed grade ten, and 15 per cent and 3 per cent respectively had completed junior high and elementary school

Examination of Table 5, which follows, indicates that the students went through their school careers at varying rates of speed. The number of years in school ranges from five to fourteen years, and the mean number of years' schooling was 11.6. Several subjects had reached the third year of college in the same length of time that it took others to get to the sixth grade.

TABLE 5
NUMBER OF YEARS SPENT IN SCHOOL BY THE SUBJECTS OF EXPERIMENTAL
GROUP

Years in Attendance at Schools	Per Cent of Subjects
5	0.9
6	1.5
7	1.9
8	3.2
9	7.4
10	8.2
11	8.2
12	36.4
13	24.3
14	8.0

For as many students as there were records available a check was made upon the subjects' absences from school. The absence records were obtained from teachers' records.² In using these data for the purposes of the present study, the number of absences for the whole school period was divided by the number of years in school. The procedure can give only a fairly adequate description of a student's attendance, since a student may have had a period of illness or may have been kept from school by family affairs for a long period in any one year, although he attended regularly during the other school years. Further, no reasons are given in the school records for absences, so that it is impossible to say which absences are truancies, which are due to sickness, or which are due to family affairs. Notwithstanding these limitations, it is believed that the attendance records used here give a fairly adequate picture of a student's attendance and are valid enough for the purposes for which they have been used in this study.

In general, statements similar to the above can be made concerning tardiness records. The data concerning tardiness, taken from the school records, are even more subject to inaccuracy

² In many cases records had not been kept, had been badly kept, had been lost, or had been destroyed. In two schools the records were destroyed by fire.

than the attendance data, owing to the fact that the keeping of records was a matter of choice by individual teachers, and also to the fact that there were great individual differences in teachers' reliability in keeping such records. The use made of these records in this study seemed to be justified, notwithstanding the limitations reported above, but any conclusions reported concerning tardiness in relation to other factors must be tempered by knowledge of the unreliability of such data.

School Marks

The marks given to the members of the experimental group during each year of their school attendance were obtained from the records kept by the schools. Although the marking procedures varied from city to city and indeed from school to school in the same city, it was the most common practice to give marks in reading, penmanship, and arithmetic only during the first three years of school. From the third year to the twelfth the number of subjects in which marks were given was increased until, in the senior high school, marks were given in as many as ten subject fields.

Examination of the marking systems employed by the teachers disclosed a great deal of variability in procedure within the same schools and even within the same courses in the school. This variability, plus the fact that a great deal of freedom was allowed in the choice of courses in the later school years (and the fact that occasionally we found just a few Growth Study pupils in one course, while the records of the other course members were not available), made it impossible to secure completely adequate measures of scholastic achievement.

A standard score technique (Kelley, 1923) based upon the distributions of marks given by each teacher for each class would have been the best possible procedure for evaluating the marks for each pupil, but owing to the limitations stated in the preceding paragraph, it was not possible to use this technique. Accordingly, the median mark of each student in each grade was obtained. The medians of the median marks for grades

one to six, seven to nine, and ten to twelve were selected as the average marks for the three levels of school attendance. The percentages of marks given at each level were then computed, and a numerical value was given to each mark by the procedure outlined by Kelley (1923, p. 101). In this procedure marks are expressed as deviations from the group mean by considering each classification of marks as representing a portion of a normal distribution.³ The mean of the proportion was found, the distance of the obtained mean from the group mean in units of the standard deviations was computed, and the resulting value was given to the classification. In this investigation the obtained values were rounded off to two places and multiplied by ten in order to eliminate decimal places in the computation.

The values allotted to each mark are presented in Table 6. The figures there indicate the extent of the variation in the percentages of marks allotted in each city and at each of the three school divisions.

TABLE 6

VALUES ALLOTTED TO MEDIAN MARKS OBTAINED BY THE MEMBERS OF THE EXPERIMENTAL GROUP IN ELEMENTARY, JUNIOR, AND SENIOR HIGH SCHOOLS

Mark	Grades 1 to 6		Grades 7 to 9		Grades 10 to 12	
	City A Value	City B Value	City A Value	City B Value	City A Value	City B Value
A	21	21	24	26	28	23
A-	15	14	17	18	21	17
B+	11	10	12	13	13	15
B	3	4	8	7	7	11
B-	2	0	2	2	2	2
C+	5	-3	-2	-3	-3	-2
C	-13	-8	-4	-10	-11	-5
C-	-23	-13	-19	-17	-18	-13
D+	-25	-13	-21	-21	-22	-17
D	-30	-14	-25		-28	-20
F+		-15				
F		-17		-25		-24
G+						
G		-20		-29		-29
G-		-27				

³ Some violence has been done to the assumptions underlying Kelley's procedure, for the school tries to raise the marks of the lower groups and hence the normality of the distribution may be destroyed.

The correlation between average mark in elementary and junior high school was .71. Between junior high and senior high marks the obtained r was .68. The correlations obtained indicate a fairly consistent performance. They are not high enough to make possible accurate prediction of performance in one of the school periods on the basis of the evidence offered by the marks obtained in the previous period.

Reading and Arithmetic Test Scores

At the time the Growth Study was begun no single test such as the Stanford Achievement Test, which can be used several years in succession to measure improvement in reading performance, was available. It was necessary, therefore, to make a selection from such tests as were available and from such as were suitable to the ages of the students and the grade levels which they had reached. The test most commonly used at each age is listed first, and the test given to students of the stated ages but not at grade (accelerated or retarded) is listed below.

- Age 8 Haggerty Reading Examination Sigma 1
Ayres-Burgess Scale for Measuring
Ability in Silent Reading P. S. 2
- Age 12 Chapman-Cook Speeded and Unspeeded
Stanford Achievement Test, Form A

Owing to the fact that these tests were standardized on populations differing quantitatively and qualitatively to a marked degree and that they measure different phases of the complex reading process, the scores from the tests are not directly comparable. At the present time the writers are engaged in an effort to secure comparable measures so that a measure of continuous growth over a twelve-year period can be obtained. The work, however, is not complete and the method could not be utilized in this study. No age norms were available for any but the Stanford Achievement Test. In order to get age norms for the other tests we used distributions of scores made by the Growth Study cases, and obtained age norms from them.

The use of such norms precludes any completely accurate comparison of a student's performance at ages eight and twelve. It precludes also any completely accurate comparison of the performance of a child who took one test at age eight with a student who took another test at the same age. The best that can be done with the data in their present shape is to state whether an individual's performance is in general superior, equal, or inferior to the performance of the average child of the same age in the two cities. Accordingly, we have classified the individuals into the number of half years each individual was retarded or accelerated from the mean performance of the student groups of which he was a member. In Table 7 we have listed the number of students so classified. Examination of this table reveals considerable consistency in test performance for ages eight and twelve. Over twice as many students were retarded

TABLE 7

PERCENTAGE OF EXPERIMENTAL SUBJECTS RETARDED, ACCELERATED, OR AT NORM IN READING ABILITY AT AGES 8 AND 12

Reading Test Performance	Per Cent at Age 8	Per Cent at Age 12
More than 2 years retarded	6.5	14.7
18-23 months retarded	7.2	6.6
12-17 months retarded	8.3	9.2
6-11 months retarded	10.3	11.5
Six months plus or minus from norm for age	20.0	20.0
6-11 months accelerated	10.3	7.6
12-17 months accelerated	10.6	6.7
18-23 months accelerated	9.2	5.7
More than 2 years accelerated	17.6	18.0

two years or more at age twelve than at age eight. Except for this variability and a consequent slightly lesser number of accelerated students, the consistency in reading test performance is marked.

A somewhat analogous situation to the reading test situation described above was found when examination was made of the arithmetic tests. The tests used at ages eight and twelve are listed as follows:

Age 8 Peet-Dearborn Progress Tests in Arithmetic, Primary Form

Age 12 Peet-Dearborn Progress Tests in Arithmetic, Intermediate Form

As in the reading tests, no completely accurate statement can be made concerning the growth of the individual in arithmetic ability, since the test scores are not directly comparable. Again, however, we can state, as in Table 8, whether or not a student is above, at, or below the average for students of his own age in his own group. A study of the arithmetic test performance reveals that arithmetic test performance is significantly less consistent than reading performance.

TABLE 8
PERCENTAGE OF EXPERIMENTAL GROUP RETARDED, ACCELERATED, OR AT THE
NORM IN ARITHMETIC PERFORMANCE

Arithmetic Test Performance	Per Cent at Age 8	Per Cent at Age 12
More than 2 years retarded	3.9	17.1
18-23 months retarded	5.0	8.2
12-17 months retarded	10.1	10.7
6-11 months retarded	13.6	11.5
Six months, plus or minus from norm	29.4	19.7
6-11 months accelerated	16.7	9.9
12-17 months accelerated	9.3	7.9
18-23 months accelerated	5.6	4.6
More than 2 years accelerated	6.4	10.4

It will be obvious to those who are well acquainted with more elaborate test procedures that the method outlined here could be improved upon with unlimited time and funds. The writers believe, however, that in the circumstances described above and in view of the purposes of this investigation the procedures used in our study are the best obtainable at the time and that they are adequate for our purpose. If reading and arithmetic performance, as measured by standard tests, is closely related to the problems of unemployment, the procedures used in this study will reveal it.

Extracurricular Activities and Part-Time Work

We have been considering performance in school strictly from the side of measurable achievement in the learning of subject matter presented in the students' course work. Such measures of achievement do, however, present a rather narrow view of the students' school activities and experience and overlook completely what some would consider the most important aspect of school life — the aspect concerned with the so-called extracurricular activities. The emphasis placed upon these activities makes it necessary in discussing students' scholastic careers to consider the extracurricular side of their school program.

During the third year of attendance at junior high school and again during the third year of the senior high school period our subjects were required to answer a questionnaire composed of items concerning the political, social, and sports activities in which they had participated while attending junior and senior high school. Information concerning hobbies, activities carried on outside of school, time spent in work after school hours, and choice of occupation was secured at the same time.

In tabulating the responses to this questionnaire ⁴ the activities were divided into three groups: political, social, and sports. The political group consisted of offices held, such as training captain, team manager, home-room representative or officer, and school committee (of student government) member. For each office held one point was given. One point was given also in the social group for membership in clubs, orchestras, bands, glee clubs, or staff memberships on school papers and magazines. The political points made in junior and senior high school periods were tabulated separately, while club memberships for the whole six-year period were combined. Participation in athletics of any kind and positions on a school athletic team were credited with one point each.

The extent to which the members of our experimental group

⁴ A copy of this questionnaire is presented in Appendix III.

TABLE 9

PARTICIPATION BY MEMBERS OF THE EXPERIMENTAL GROUP IN EXTRACURRICULAR ACTIVITIES DURING THEIR PERIODS OF ATTENDANCE AT JUNIOR AND SENIOR HIGH SCHOOL (FOR SOURCE OF DATA SEE TEXT)

Points Earned for Club Membership	Per Cent Students Junior and Senior High School	Points Earned for Political Offices Held	Per Cent Students		Points Earned Sports	Per Cent Students	
			JHS	SHS		JHS	SHS
0	03	0	52.9	80.5	0	48.4	74.0
1	27.1	1	22.2	9.9	1	10.4	8.1
2	25.9	2	11.5	5.0	2	11.0	4.5
3	18.9	3	5.6	3.0	3	6.8	5.5
4	12.6	4	4.8	0.7	4	5.3	2.5
5	7.7	5	1.6	0.2	5	4.1	1.2
6	3.0	6	0.8	0.6	6	4.5	1.2
7	2.7	7	0.4	0.1	7	2.1	0.9
8	1.3	8	0.1		8	2.4	0.5
9	0.4	9			9	3.4	0.6
10	0.1	10			10	1.6	1.0
N	1030		998	852		996	851

engaged in extracurricular activities may be seen by referring to Table 9, in which is recorded the credit earned by the subjects whose records were available. The figures presented in Table 9 show that there is more interest in club membership than in office holding and sports activities. The difference may, of course, arise from the fact that membership in clubs is required in some instances, that "election" is not necessary, as it is in the political offices, or that certain abilities are not required, as in sports. The falling off in political and sports participation from the junior to senior high school is noticeable.

The question concerning part-time work could be answered by checking either of three words — "none," "sometimes," and "regular." In order to differentiate between students who responded by checking one of the above words, credit of one was given to those who checked "none," credit of two was given if the student had worked "sometimes," and credit of three was given to the student who had done work outside of school regularly while he was attending high school.

In response to the question concerning part-time work, 26 per cent of those subjects for whom records were available replied that they had not done any work outside of school, 47 per cent had worked irregularly, and 27 per cent worked regularly during the period of time that they attended junior and senior high school.

General Intelligence Test Scores

Two group intelligence tests were administered to the Growth Study subjects each year. The tests were administered by members of the staff of the Psycho-Educational Clinic at Harvard University. At the age levels eight, twelve, and sixteen, which are considered in our study, the tests administered were:

- Age 8 — 1. Dearborn Group Test of Intelligence,
General Examination A.
- Age 8 — 2. Otis Primary Intelligence Test, Form A
- Age 12 — 1. Dearborn Group Test of Intelligence,
Series II, General Examination C,
Revised Edition for Grades 4 to 12

Age 12 — 2 Haggerty Intelligence Examination,
Delta 2, for Grades 3 to 9

Age 16 — 1. Detroit Advanced Intelligence Test,
Form W

Age 16 — 2. Revised Alpha Examination, Form 5

Since the tests had been standardized upon different populations, the scores obtained from them are not comparable in their raw form. Ratcliff (1934) describes a method of securing comparable scores from the Growth Study Test scores as follows:

The method used for rendering the results from the different tests comparable was that of converting the scores obtained from the separate tests into measures which were expressed in terms of relative positions in the group. In the use of this method it was assumed that like positions in the distributions of results from different tests given to the same pupils was equivalent. . . . The percentile-rank method was selected as the most satisfactory procedure for determining positions in the group. This procedure designates a certain score in the distribution below and above which are a certain percentage of the group. . . . The data are from 320 complete cases. . . . The error of the equated measures due to the unreliability of the tests is less than 0.4 points in I. Q. for the 65 per cent of the cases nearest the mean. The error at the extremes of the distribution are small, being slightly over 1 point I. Q.

Ratcliff (1934, p 248) presents a table of equivalent intelligence quotients for 320 subjects in 21 tests. His table has been used in equating the scores obtained from the six tests listed on the preceding page. The two I. Q.'s obtained each year were averaged, giving a single measure for that year. The I. Q.'s thus obtained for ages eight, twelve, sixteen are presented in Table 10, examination of which reveals that there are no great differences in the averages and variability of the I. Q.'s over the nine-year period. The mean equated I. Q.'s for ages eight, twelve, and sixteen are 103.8, 99.3, and 97.5. The σ 's at the same ages are 17.9, 16.9, and 16.2. A study of individual performance reveals, however, that there are significant changes.

Variations of forty points for some individuals have been noted, and no individual varied less than eight I. Q. points over the eight-year period.

TABLE 10

DISTRIBUTIONS, MEANS, AND SIGMAS OF THE INTELLIGENCE QUOTIENTS OF THE SUBJECTS OF THE EXPERIMENTAL GROUP — DATA FROM THE HARVARD GROWTH STUDY — QUOTIENTS FROM SIX GROUP TESTS EQUATED BY THE RATCLIFF METHOD

Intelligence Quotients	Age 8 N	Age 12 N	Age 16 N
60- 69	26	51	32
70- 79	27	115	111
80- 89	226	202	226
90- 99	266	253	260
100-109	250	231	233
110-119	170	161	128
120-129	122	99	62
130-139	37	29	21
140-149	53	20	11
150-159	5	3	1
Totals	1182	1164	1085
Means	103.8	99.3	97.5
* σ	17.9	16.9	16.2

* Not corrected for grouping

The variation mentioned above and revealed in Table 10 is in line with the findings of several other investigators included — among which are Lincoln and Wadleigh (1932), Wheeler (1932), Gildea and Macoubrey (1933), Brown (1933), Wellman (1932) — and may be due to any of the factors mentioned by them.

The findings that the mean I. Q. remains at about the same figure at the three age levels suggest only that the standardization of the tests has been rather well done and that the Ratcliff procedure does not greatly interfere with that standardization.

Reasons for Leaving School

Information concerning the reasons for leaving school given by the members of the experimental group was gathered by personal interview with students, by visits to their homes during

which parents and other members of the family were interviewed, and by consultation with school officials and teachers. Examination of the records so obtained indicated that there were eight main reasons given for leaving school. The reasons, with the percentages of members of the experimental group who gave them, are presented in Table 11. Occasionally a subject was found who could not be classified under any of the eight headings, and he had to be placed in the miscellaneous class. Occasionally, too, subjects had left the city in which they first attended school and it has been impossible to trace them and to find out why they left school.⁵

TABLE 11
PERCENTAGE OF MEMBERS OF THE EXPERIMENTAL GROUP WHO LEFT
SCHOOL FOR THE REASONS GIVEN

Reasons for Leaving School		Per Cent of Experimental Group Giving Such Reasons
(1)	Graduated	53.4
(2)	Preferred work to school	33.1
(3)	Moved from the city	6.7
(4)	Miscellaneous	3.5
(5)	Needed at home	1.3
(6)	Expelled	0.9
(7)	Ill health	0.9
(8)	Married	0.2

Examination of Table 11 above reveals that 53 per cent of our subjects were high school graduates. Thirty-three per cent had left school to go to work before graduation from school. Almost 7 per cent had left the city, and no records were available other than the statements on our questionnaire, which could not be checked. The remainder of the group (approximately 7 per cent) had left school for various reasons which included expulsion, sickness, marriage, and confinement to penal and mental institutions.

⁵ Mr. H. C. Seymour, formerly of the Medford, Massachusetts, High School is at the present time actively engaged in following up all Growth Study subjects, and it is expected that he will have complete figures on the reasons for leaving school.

About the time that the members of this experimental group were old enough to leave school and secure working permits there was a marked reduction in employment opportunities, so that we cannot determine to what extent the distribution found here is typical of distributions found in periods when there are normal employment opportunities. The percentages in Table 11, then, must be considered only in the light of existing conditions.

The headings used in Table 11 have been selected after careful consideration. It will be noted there are no classifications such as, "low scholarship," and "low intelligence," for it has been found that the problems of school leaving are much more complex than they have previously been considered. "Low scholarship," for example, appears to be a reason for leaving school until further investigation is made. The investigation may reveal that the "low scholarship" and school leaving are both due to a third factor which needs further study.

It is, then, with the knowledge that the data we have collected are incomplete and perhaps typical of the school-leaving situation only during a period of depression, that they are presented here. The information, however, is the best obtainable, and if it is remembered that generalizations concerning the school leaving of other groups under different economic conditions cannot be made safely on the basis of the information presented here, the data are of considerable value in completing our description of the experimental group. The relationships between the factor of school leaving and various other educational, psychological, sociological, and economic items are presented in Chapter V.

*Differential Skeletal Maturation*⁶

During the Growth Study examinations a series of X-ray films of each child's right hand and wrist was made so that we should have material showing skeletal changes between ages seven and nineteen. The most complete cases include thirteen films

⁶ This section of the report was written by Charles O. Goldberg, B.A., who has done most of the assessing of the films, who has taken a keen interest in the work, and who has done work far beyond what was required by his position.

"Growth" includes increase in dimensions and differentiation, progress toward maturity. The former is *growth* proper, the latter *development*. The distinction between these two processes must be kept in mind, for as Professor T. W. Todd (1931) has written, "Some children are tall for their age, others are old for their years. The former show accelerated *growth*. The latter show accelerated *development*."

Rotch (1910), Pryor (1908), and others did pioneer work on the skeleton of the hand, using actual measurement of the outlines of the carpal bones on the X-ray film. Their work was based on large groups of children of various ages. Prescott (1923), West (1935), Cattell (1934), using the Harvard Growth Study serial films, have studied the skeleton of the hand by measurement of the bones. Their method is a quantitative objective measurement of the growth in size.

For several years Todd (1931) has been perfecting a method of measuring skeletal development, not only in hand and wrist but also in foot and ankle, knee, elbow, shoulder, hip, and pelvis. He depends not on actual measurement of the bones, but rather upon differentiation of various bone elements, particularly the epiphyses. Since he is measuring the maturation of the skeleton by differentiation of bones, Todd (1931) has named his method "Differential Skeletal Maturation." He has established norms, divided into six-month age groups, and by comparing a child's films with the standards he can assess the status of the child's skeletal development and express it in terms of skeletal age. His method is a qualitative subjective measurement of progress toward maturity.

It is this second method which we have employed in this particular study, but inasmuch as we have used serial films we can assess not only the status but also the progress of the child's development. The importance of the method may be understood from Todd's (1931) statement: "Of all bodily features, skeleton, lungs, and blood most closely follow the body in their developmental pattern, and of these the skeleton is the easiest to study. The progress of skeletal differentiation may be used

as a time clock for the registration of bodily development." According to Todd's (1931) own statement, however, a child is not to be regarded as unduly advanced or retarded unless his skeletal age is nine months or more above or below his chronological age.

In our work we have assessed our films by Todd's revised unpublished 1934 standards for the hands of white boys and girls. These standards are not original X-ray films but are translucent photographic reproductions of those films which Todd chose as most characteristic of each six-month age group. In the usual process of assessing, the film being studied is placed in an illuminator, and the worker shuffles through the standards until he finds the one most closely resembling his film. To eliminate the delay and bother of this method, Dr. E. D. West has devised an illuminating apparatus which has greatly speeded up the process of assessing.

The boys' standards range from 3-0 to 18-11, while the girls' standards range from 3-0 to 16-5. Thus a skeletal age (Sk A.) of 18-11 represents skeletal maturity for boys, and a skeletal age of 16-5 represents skeletal maturity for girls. For this particular study we are using only the skeletal ages at eight, twelve, and sixteen.

The reliability of the assessments procedure for determining skeletal age was determined by selecting one hundred cases at random from each sex group at ages eight, twelve, and sixteen, repeating the assessment, and finding the coefficient of correlation between the measures. The coefficients obtained in this manner, the standard deviations of the distributions, and the probable error of measurement are reported in Table 12, which follows. Examination of the probable errors of estimate reveals that they are of approximately equal size. The values given indicate that the obtained assessment of skeletal age is as likely to vary from the individual's estimated true skeletal age by an amount greater than four months as it is likely to vary by an amount less than four months (at age eight), by three months (to the nearest month at age twelve) and by two and one

respectively at ages sixteen for girls and boys. In view of the fact that the method used is subjective and that Todd (1931) allows wide leeway in placement, the probable errors are not un-

TABLE 12

RE-ASSESSMENT COEFFICIENTS, STANDARD DEVIATIONS OF THE DISTRIBUTIONS AND PROBABLE ERRORS OF ASSESSMENTS OF SKELETAL AGES OBTAINED FROM ROENTGENOGRAPHS

Groups	N	Ages	r_{12}	P E _{est}
Girls	100	8-0	.71	3.71
Girls	100	12-0	.84	3.28
*Girls	100	16-0	.85	2.18
Boys	100	8-0	.80	3.80
Boys	100	12-0	.86	3.07
*Boys	100	16-0	.97	1.33

* The small probable errors of estimate here are due to the fact that many of the students have reached skeletal maturity at the stated age. Todd's standards for maturity are 16-5 for girls and 18-11 for boys. The procedure used in the years eight and twelve do not fit the sixteen-year data well.

duly large, and the assessments are sufficiently accurate for the uses to which they have been put in this investigation. They are probably reliable enough for individual clinical diagnosis of skeletal maturity.

Anthropometric Measurements

During the first year of the Growth Study eighteen anthropometric measurements were taken of each child. Subsequent computations and repetitions of measurements revealed the fact that some of the measurements were not good indicators of growth, while others did not have a sufficiently high degree of reliability when made under public school conditions. The following measurements were retained throughout the study:

Standing Height	Chest Width
Porion Height	Chest Depth
Sternal Notch Height	Head Width
Sitting Height	Head Length
Iliac Diameter	Weight

For the purpose of the present investigation the measurements of standing height and weight at ages eight, twelve, and sixteen were selected to describe the physical characteristics of the experimental group. Since the students had not been measured on their birthdays, and since it was desirable to have measures at the same ages, all measurements were interpolated back to the even years,⁷ so that all height and weight measurements are reported at ages eight, twelve, and sixteen.

In 1924 Lincoln found that measurements of height and weight made by one person only were inaccurate. Since then, all measurements have been made by three individuals, none of whom knew the result obtained by the other measureis. Inspection of the three measurements by a fourth individual followed, and if they did not fall within a range of 11 centimeters (0.5 mm. in the case of head measurements), the subject was sent back to the measurer who was farthest off from the other two. If the fourth measurement failed to agree with the others, the subject was sent back for six measurements. The procedure outlined has resulted in what is probably as accurate measurement as is possible under public school conditions.

The complete records of the anthropometric measurements will form one of the most significant contributions of the Growth Study, and various procedures for studying individual and group measures of growth (Dearborn, 1935) are being devised but are not yet ready for report. In this investigation we shall be concerned with group averages or individuals who have shown extreme abnormalities in growth only in their relation to our study of employment backgrounds. The measurements of the standing height and weight of our subjects who have been classified by employment status are reported in Chapter V.

⁷The procedure for interpolating was suggested by Dr. John C. Flanagan.

CHAPTER III

THE QUESTIONNAIRE STUDY

Questionnaire Data

To each of the subjects described in the chapter immediately preceding a questionnaire was sent.¹ The questionnaire was concerned with employment status and attitudes toward employment, existing conditions, and education. A general idea of what is covered in the questionnaire may be obtained by noting the headings of the questions which follow

All members of the experimental group were asked to respond to questions concerning

Employment status

Means used in trying to obtain employment

Extent of schooling

Occupational training

Future occupational plans

Previous training —

(a) School subject of most practical value

(b) School subject enjoyed most

(c) School subject the student would like to study now

Attitude toward existing conditions

Attitude toward education

Only those subjects who were *unemployed* at the time of responding to the questionnaire were required to answer questions concerning

Smallest salary for which person would work

Attitude toward unemployment

and only those subjects who were *employed* were required to answer questions concerning

Present position

Present salary

¹ A copy of the questionnaire in the form in which it was used and copies of the letters sent with the questionnaire are presented in Appendix I. Percentage of response to the questionnaire is reported in the following section

Recent salary changes
Lowest acceptable salary to change position
Attitude toward employment

In order to get a clear view of what was sought after by the questionnaire procedure, it is necessary to examine each of the sixteen questions in some detail. We have presented the complete questions in the hope that the reader will take time to go through them carefully, so that he may be able to judge our results critically with complete knowledge of the methods used in securing them.

The first question asked of *all* students concerned their employment status in the year 1935. The question as it appeared in the questionnaire follows:

I. *Employment Status*

Draw a circle around the number in front of the statement which best represents your recent circumstances

1. I have been employed all the time during the past year.
2. I have been unemployed all the time during the past year.
3. I have been at home and not desiring employment during the past year.
4. I have been attending school during the past year
5. I have been employed more than half the time during the past year.
- 6 I have been employed some, but less than half the time during the past year.

From information concerning the employment status of the individual all other deductions were made. On the basis of the response of the first question the subjects were divided into six groups and the characteristics of each group considered with respect to seventy-four items of information. The relative size of our groups is reported in section 2 of Chapter IV.

The second question answered by *all* students was composed of a check list of nine items. The subjects indicated the procedures utilized in trying to obtain employment by checking the list which was presented. The question in its original form is presented as follows:

II. *Means Used in Trying to Obtain Employment*

Draw circles around the numbers in front of the statements which give things you did in trying to obtain employment.

- 1 I registered at a public employment agency, such as city, county, state, United States Government.
2. I registered at a private employment agency, one at which a fee is charged
- 3 I answered help wanted newspaper advertisements.
4. I filled out work applications at stores and industrial organizations
- 5 Members of my immediate family who are working tried to help me to get work where they are working.
6. Members of my immediate family tried to get me placed through friends of theirs.
- 7 I appealed to my relatives to help me get a position
- 8 I appealed to my friends to help me get a position
- 9 I appealed to the school authorities to help me get a position.

The effectiveness and ineffectiveness of these various procedures in the securing of employment will be indicated in a later section.

The third question relates to the length of time of school attendance. This question, presented below, was asked simply for the purpose of checking previously obtained data concerning school attendance and for securing information concerning the continuance of education after the senior high school years.

III. *Schooling*

Draw a circle around the numbers which represent the last school grades you attended.

Elementary	Junior High	Senior High	College	Special School
1 2 3 4 5 6 7	7 8 9	10 11 12	I II III IV	I II III IV

Write the names of the schools you attended on the lines below

Elementary	Junior High	Senior High	College	Special School
_____	_____	_____	_____	_____

The response to this question gives information necessary for the study of the relationship of length of schooling to employment status and to attitudes toward employment and education

Question IV is concerned with occupational training. It is

composed of a list of twelve occupations below the professional and semiprofessional levels, since the subjects had not had time to secure training on those levels. The response to question IV, when correlated with the other data, gave information concerning both the kinds of training which are likely to be least sought at the present time and the kinds of training received.

IV *Occupational Training (for both employed and unemployed)*

Draw circles around the numbers in front of the occupations for which you are trained, and also mark an X on the number of the one of these for which you are best suited

- 1 Clerk, including stenographer or general office worker.
2. Store clerk, salesman, saleswoman, etc.
3. Automotive repair work, including machinist, garage helper, machine and motor repair and service work, mechanic, and toolmaker.
- 4 Domestic, any kind of household work, such as children's nurse, governess, cook, etc.
5. Agricultural work, farmer's helper, forestry, etc.
6. Printing and its allied work of engraving, photography, etc.
7. Electrical work, technical maintenance, service or repair work.
8. Dressmaking.
9. Hairdressing, beautician, masseuse, etc.
10. Carpentry and industrial painting.
11. Commercial art and writing.
- 12

(If you are trained for any occupation not listed above, circle 12 and write the name of the occupation on the blank following.) Be sure you have marked an X on the occupation for which you are best suited.

The fifth question is designed to secure information concerning what our representative groups of students expect to be doing five years hence. The classification of occupations which follows is taken from Goodenough (1928).

V. *Future Occupational Plans*

Draw a circle around the number in front of the statement which expresses most closely your future plans.

What do you believe your occupation will be five years from today?

1. Day laborers of all classes: — laborer, longshoreman, cleaner, farm laborer, manufacturing operator, factory machine operator, etc
2. Slightly skilled trades: — miner, elevator tender, servant, janitor, deliveryman, sailor, soldier, etc.
3. Semiskilled, minor clerical, and minor business: — chauffeur, barber, fireman, policeman, store clerk, retail dealer (in groceries, meats, milk, confectionery), telephone operator, tailor, waiter, salesman, shoemaker, mechanic, toolmaker, etc.
4. Farming: — farmer, florist, gardener, poultry raiser, etc.
5. Clerical, skilled trades, retail business: — bookkeeper, transportation inspector, carpenter, electrician, foreman, retail dealer (in automobiles, furniture, produce, clothing), plumber, etc.
6. Semiprofessional: — musician, transportation official, managerial position, proprietor, captain, pilot, business executive, etc.
7. Professional: — architect, artist, clergyman, engineer, doctor, dentist, lawyer, teacher, etc.

With the response to this question we now have available the stated vocational choice of the members of the experimental group at three stages of their careers, for the records of the Growth Study contained data concerning their occupational choices at the junior and senior high school levels. The extent to which there is correlation between the three choices, the extent of change over a period of years, and the difference in amount of change between employed, unemployed, trained and untrained can be observed

The question concerning previous training (question XIV in the questionnaire), outlined in detail below, seeks information concerning the opinions of the members of the experimental group on which school subjects were of most value to them, which were of most enjoyment to them while at school, and which they would like to study at the time of responding to the questionnaire.

XIV. *Previous Training*

(a) Practical Value.

Draw a circle around the number in front of the subject of most value to you.

- | | |
|---------------------|--|
| 1. English. | 7. Domestic Science. |
| 2. History. | 8. Art and Commercial Art. |
| 3. Languages. | 9. Office Practice, Shorthand,
Typewriting. |
| 4. Mathematics. | 10. Music. |
| 5. Science. | 11. Trade School Courses |
| 6. Manual Training. | 12. |

Circle the above number 12 if the subject of most value to you is not listed above, and write out the name of the subject on the line.

(b) Enjoyment.

Draw a circle around the number in front of the subject you enjoyed most.

- | | |
|----------------------|--|
| 1. English. | 8. Art and Commercial
Art. |
| 2. History. | 9. Office Practice, Shorthand,
Typewriting. |
| 3. Languages. | 10. Music. |
| 4. Mathematics. | 11. Trade School Courses. |
| 5. Science. | 12. |
| 6. Manual Training. | |
| 7. Domestic Science. | |

Circle the above number 12 if the subject you enjoyed most is not listed above and write the name of the subject on the line.

(c) Present Interest.

Draw a circle around the number in front of the subject you would prefer to study now if you had a chance.

- | | |
|---------------------|--|
| 1. English | 7. Domestic Science. |
| 2. History. | 8. Art and Commercial Art. |
| 3. Languages. | 9. Office Practice, Shorthand,
Typewriting. |
| 4. Mathematics. | 10. Music. |
| 5. Science. | 11. Trade School. |
| 6. Manual Training. | 12. |

Circle the above number 12 if the subject you would prefer to study is not listed above and write out the name of the subject on the line.

XV *Existing Conditions*

Below each statement are five choices — (1) Strongly agree; (2) Agree, (3) Undecided, (4) Disagree; (5) Strongly disagree. Underline the word under each statement that best expresses your opinion.

1. Young people today have a better opportunity to get ahead in the world now than they did ten years ago.
Strongly agree Agree Undecided Disagree Strongly disagree
2. The depression has greatly retarded the progress of youth.
Strongly agree Agree Undecided Disagree Strongly disagree
3. It will be a long time before things get better
Strongly agree Agree Undecided Disagree Strongly disagree
4. Hard conscientious work will be rewarded with an increase in salary and promotion.
Strongly agree Agree Undecided Disagree Strongly disagree

Questions XV and XVI present attitude scales.² The first attempts to measure the students' attitudes toward existing conditions and the second, the attitudes toward education. The first four items of question XV have each been treated separately and the scores obtained from these items have not been combined with the other items in the question. Examination of the items, presented immediately above, reveals that an attempt has been made to get student opinion on four much discussed subjects. The response to the items has thrown considerable light on the extent to which the economic depression has discouraged the individuals concerned and has revealed the extent to which they look with optimism toward the future.

The last five items of question XV have been scored as a continuum in the manner suggested by Likert (1932). By this procedure items 5, 6, 7, 8, and 9 are intended to form a continuous scale of attitude toward government (and particularly the present government) policies. The five remaining items of question XV are as follows:

² Brief discussion of the attitude measurement problem is presented in Chapter IV.

Below each statement are five choices — (1) Strongly agree; (2) Agree; (3) Undecided; (4) Disagree; (5) Strongly disagree. Underline the word under each statement which best expresses your opinion.

5. The Government should provide jobs for all young people who are unable to find work.
Strongly agree Agree Undecided Disagree Strongly disagree
6. The CCC camp is a good thing, and more people should be allowed to enroll.
Strongly agree Agree Undecided Disagree Strongly disagree
7. Young people would be better off and have more jobs if the Government reduced taxes and did not try to regulate business.
Strongly agree Agree Undecided Disagree Strongly disagree
8. Unemployment Insurance should be provided for everyone.
Strongly agree Agree Undecided Disagree Strongly disagree
9. The Government should not make individuals help provide pensions for old people
Strongly agree Agree Undecided Disagree Strongly disagree

They deal with the problems of the Works Progress Administration, the Civilians Conservation Corps, the relation of government to business, unemployment insurance, and old age pensions. The scoring procedure allowed five points for each time that the student endorses the policies of the government by underlining "strongly agree" in items 5, 6, and 8, or by marking "strongly disagree" on the items 7 and 9, two points for "disagree" on 5, 6, and 8, and for "agree" in 7 and 9. One point was given for "strongly disagree" in 5, 6, and 8, and one point for "strongly agree" in 7 and 9. The question is designed, of course, to get an answer to the question "Do you agree with these policies of the present federal government?"

Question XVI, answered by all the members of the experimental group, was designed to determine their attitude toward education. Again an attempt was made to set up a continuum, the nature of which will be observed by noting the following items of the question.

XVI. *Education.*

Below each statement are five choices — (1) Strongly agree; (2) Agree; (3) Undecided, (4) Disagree; (5) Strongly disagree. Underline the word underneath each statement that best expresses your opinion

1. Going to school is a waste of time
Strongly agree Agree Undecided Disagree Strongly disagree
2. School may be all right for some, but it has been of no value to me.
Strongly agree Agree Undecided Disagree Strongly disagree
3. Reading, writing, and arithmetic are the only things school gave me that are of any importance to me.
Strongly agree Agree Undecided Disagree Strongly disagree
4. Six grades of schooling would have been plenty for me.
Strongly agree Agree Undecided Disagree Strongly disagree
5. Very few people should be given any schooling beyond the ninth grade.
Strongly agree Agree Undecided Disagree Strongly disagree
6. Everyone should go to school at least twelve years or graduate from high school
Strongly agree Agree Undecided Disagree Strongly disagree
7. Everyone should be allowed to take as much post-graduate work as he wished.
Strongly agree Agree Undecided Disagree Strongly disagree
8. The schools should enable everyone to have two years advanced training, either in college or in a special training school
Strongly agree Agree Undecided Disagree Strongly disagree
9. I think everyone should receive some school training and supervision until he is 25 years old
Strongly agree Agree Undecided Disagree Strongly disagree

The range of the continuum is from the belief that school is a waste of time to the belief that everyone should receive school training until he is twenty-five years of age. A person who believed most strongly in education could score 45 points, while those who strongly opposed would score 9.

The attitude scale *answered only by those of our subjects who were unemployed* was presented in question XIII, which follows.

XIII. *Towards Unemployment* (to be answered by persons now unemployed)

Below each statement are five choices — (1) Strongly agree; (2) Agree; (3) Undecided, (4) Disagree; (5) Strongly disagree. Underline the word underneath each statement that best expresses your opinion.

1. I am perfectly satisfied to be unemployed.
Strongly agree Agree Undecided Disagree Strongly disagree
2. I do not mind being unemployed
Strongly agree Agree Undecided Disagree Strongly disagree
3. It is rather monotonous not to have a regular position.
Strongly agree Agree Undecided Disagree Strongly disagree
4. I wish I could get a position so that I could start working myself up in an occupation
Strongly agree Agree Undecided Disagree Strongly disagree
5. It is aggravating to realize I cannot get employment.
Strongly agree Agree Undecided Disagree Strongly disagree
6. I am unhappy about being unemployed.
Strongly agree Agree Undecided Disagree Strongly disagree
7. I am very dissatisfied with having to remain unemployed.
Strongly agree Agree Undecided Disagree Strongly disagree
8. I am thoroughly disgusted at not being able to get a position.
Strongly agree Agree Undecided Disagree Strongly disagree
9. It is extremely unjust and unfair to me to keep me unemployed
Strongly agree Agree Undecided Disagree Strongly disagree

The continuum here extends from "being perfectly satisfied to be unemployed" to believing it "extremely unjust and unfair to be kept unemployed." The scoring, after simplification, extends from one to five. The answers to this section of the questionnaire give us an opportunity to determine just to what

extent the lack of employment makes young people dissatisfied with their lot

Another attitude scale was answered *only by those who were employed* at the time of filling out the questionnaire. This scale was question XI on the original form.

XI. *Towards Employment* (to be answered by persons now employed)

Below each statement are given five choices — (1) Strongly agree; (2) Agree; (3) Undecided; (4) Disagree; (5) Strongly disagree Underline the word underneath each statement that best expresses your opinion.

1. I like this work better than any other I can think of.
Strongly agree Agree Undecided Disagree Strongly disagree
2. I really enjoy doing this work.
Strongly agree Agree Undecided Disagree Strongly disagree
3. This job has several very decided advantages over most other jobs.
Strongly agree Agree Undecided Disagree Strongly disagree
4. This work has its merits.
Strongly agree Agree Undecided Disagree Strongly disagree
5. This work seems to be satisfactory.
Strongly agree Agree Undecided Disagree Strongly disagree
6. My likes and dislikes for this work about balance one another
Strongly agree Agree Undecided Disagree Strongly disagree
7. This work would be all right if it were not for a few disagreeable things.
Strongly agree Agree Undecided Disagree Strongly disagree
8. Quite a number of things about this job annoy me.
Strongly agree Agree Undecided Disagree Strongly disagree
9. There are too many undesirable qualities about this work.
Strongly agree Agree Undecided Disagree Strongly disagree
10. The less I see of this job the better I like it.
Strongly agree Agree Undecided Disagree Strongly disagree
11. I have a feeling of hatred for this job.
Strongly agree Agree Undecided Disagree Strongly disagree

Again we have a continuum extending from "liking this work better than any other I can think of" to "having a feeling of hatred for this job." Obviously the object of this question is to find out to what extent those who are working *are* pleased with their positions. Closely allied with this problem of attitude toward the job are questions VIII, IX, and X which follow:

VIII. *Employment Experience* (for those who are employed)

Draw circles around the numbers in front of the statements that describe your experience.

1. My salary has been reduced more than 25 per cent since I became employed.
2. My salary has been reduced between 10 and 25 per cent during this period.
3. My salary has been reduced less than 10 per cent during this period.
4. I have changed to work which I do not like as well during this period
5. I have received no advancement since I became employed.
6. My salary has not been changed since beginning work in this position.
7. I have changed to work which I like better during this period.
8. I have been promoted since I became employed
9. My salary has been increased less than 10 per cent during this period.

IX. *Salary Level* (for those who are employed)

Draw a circle around the number in front of the statement which best represents your present salary

My salary or income from my work is:

1. \$6 per week or less.
2. \$7 to \$10 per week.
3. \$11 to \$14 per week.
4. \$15 to \$18 per week.
5. \$19 to \$21 per week.
6. \$22 to \$25 per week.
7. \$24 to \$30 per week.
8. \$30 per week or more.

Circle the numbers in front of the following statements if true.

9. In addition to the salary marked above, my employer gives me meals.
10. In addition to the salary marked above, my employer gives me a room

X. *Lowest Acceptable Salary to Change your Position* (for those employed)

Draw a circle around the number in front of the statement that represents the smallest salary for which you would change.

1. For salary of \$6 to \$8 per week.
2. For salary of \$9 to \$11 per week.
3. For salary of \$12 to \$14 per week.
4. For salary of \$15 to \$17 per week.
5. For salary of \$18 to \$20 per week.
6. For salary of \$21 to \$24 per week.
7. For salary of \$25 to \$30 per week.
8. For salary of \$30 or over
- 9 I would make a change without increase.

Questions VIII, IX, and X are concerned with the salary and promotion of those subjects who had secured employment. The items of the questions are self-explanatory, and the responses give us information concerning what positions are available for people such as the members of our experimental group, and tell us what opportunities are offered to improve their situations with respect to rank and salary.

The purpose of question VI is to determine which methods of obtaining employment are most successful. Question VII requires the subject to tell what kind of work he had succeeded in getting, and names and addresses of employers were required so that a check could be made on the subject's veracity.

VI. *Means Used in Obtaining Employment* (for those employed)

Draw a circle around the number in front of the statement which expresses the method you used in securing employment.

1. I registered at a public employment agency, such as city, county, state, United States Government.

2. I registered at a private employment agency, one at which a fee is charged.
3. I answered help wanted newspaper advertisements.
4. I filled out work applications at stores and industrial organizations
5. Members of my immediate family who are working tried to help me to get work where they are working.
6. Members of my immediate family tried to get me placed through friends of theirs
7. I appealed to my relatives to help me get a position.
8. I appealed to my friends to help me get a position
9. I appealed to the school authorities to help me get a position.

VII. *Present Position* (for those employed)

Fill in blank spaces as required

1. What is your present position?
2. What type of work are you doing?
3. What is the address of the place where you are working?

Examination of question XII, presented below, gives us some idea of what salary would be acceptable to the unemployed subjects.

XII. *Lowest Acceptable Salary* (for those who are unemployed)

Draw a circle around the number in front of the statement that represents the smallest salary for which you would work.

1. \$6 a week or less
2. \$7 to \$8 per week.
3. \$9 to \$11 per week.
4. \$12 to \$14 per week.
5. \$15 to \$17 per week.
6. \$18 to \$20 per week.
7. \$21 to \$24 per week
8. \$25 to \$30 per week
9. \$30 or over.

We have already secured information from question II concerning the methods utilized in trying to secure employment, and we now learn from this question what the subjects would

have accepted had they been offered positions at the salary level indicated.

At the end of the questionnaire the subjects were invited to write any comments they wished to make about their personal experiences or opinions and were given almost two pages of space on which to answer. Thirty-four per cent of the subjects took advantage of the opportunity to write comments favorable or unfavorable on their employment and scholastic experiences, to project, to rationalize, to proclaim their own virtues, to give alibis for their present condition, to curse senders of questionnaires, and even in one case to ask for a loan.

There was a slight tendency for girls to be more verbose. The school group wrote notes more frequently than either employed or unemployed groups. Between the latter groups there are no great differences in the number of letters written except in the case of the girls who were working "less than half time." The members of this group wrote 8 per cent more letters than any of the others. There was, however, no marked tendency in any group toward any of the types of letters mentioned in the previous paragraph.

The purpose of this section of the report has been simply to draw the attention of the reader to the methods used in securing information concerning the employment status and general attitudes of the subject. If the reader's curiosity has been aroused about the answers to the questions presented he will find them in Chapter IV. The following sections of the present chapter are devoted to a report of the response to the questionnaire and a study of the reliability of the questionnaire procedure.

The Questionnaire Response

The questionnaire described in the previous section was mailed on July 5, 1935 to 1,712 of the subjects described in Chapter II. The post office immediately returned 171 letters stating that the individuals were not at the addresses given, but our first letter brought a return of 440 (29 per cent) usable replies within one week. The second letter was sent eight days

after the first letter, and follow-up letters³ were continued until eight had been mailed. At the end of the period in which eight letters had been sent, only 80 per cent of the subjects had replied. We then made as many telephone calls and personal visits to the homes of the subjects as possible.

The results from the various procedures used in getting replies to the questionnaire are listed in Table 13. Examination of this table discloses that we have secured a usable return of 88 per cent from our original population.

TABLE 13
RESULTS OF PROCEDURES UTILIZED IN GETTING REPLIES TO OUR QUESTIONNAIRE FROM THE MEMBERS OF THE EXPERIMENTAL GROUP

Method and Date (1935)	Per Cent Return	Cumulative Per Cent Return
Form letter, July 5	29	29
Form letter, July 13	22	51
Form letter, July 25	5	56
Form letter, July 31	10	66
Form letter, Aug 6	5	71
Form letter, Aug 15	3	74
Personal letter, Aug 22	5	79
Cartoon and letter, Sept 6	1	80
Telephone calls after Sept. 6 (90 calls)	3	83
Personal visits after Nov 6 (225 visits)	5	88
Per cent failed to reply *	(12)	

* Investigation of those cases from whom no replies were received revealed that the main reasons for failure to reply were: Confined to penal and mental institutions, religious life, member of CCC, U S Navy and Army, and parents' unfamiliarity with subjects' addresses. Five were deceased. Thirty-eight refused to reply to the questionnaire.

Our percentage of returns appears to set a new high for response to a questionnaire of such length and addressed to such a large group of subjects. Toops (1935) got a return of 97 per cent from 178 graduates of trade school courses, and he reports (1926) a return of 100 per cent from a group of college professors and administrative authorities. These groups, however, cannot be compared with our experimental groups in numbers and academic standing. Baird (1929) reports a return of 90 per cent from 52 students of public and private schools to a

³Copies of the follow-up letters are presented in Appendix I.

questionnaire of sixteen questions; he reports also 100 per cent return from principals of public and private schools to the same sixteen questions. In the latter study, however, \$1 00 was enclosed with the questionnaire. Wrenn (1934) received answers from 3,021 and 1,209 graduates of Stanford University to a questionnaire designed to get their opinions on the benefits of education and their satisfaction with their vocation.

The questionnaire used in this study is longer and was addressed to more subjects than any of those mentioned above. Our return of 88 per cent of those members of our population who received the questionnaire appears to be a record return. Since the value of a questionnaire study (other things being equal) is determined largely by the percentage of response, it would seem that the return we have secured should make our results significant.

Reliability and Validity of the Questionnaire Method

Carroll (1933) investigated the reliability of questionnaire responses by having 123 eighth-grade children answer a questionnaire twice within a period of one week. The percentage of agreement on eighty questions was 87. For a neurotic inventory of twenty-four questions dealing with factual circumstances about the parents and home surroundings, estimates involving numbers, time, parental activities, and attitude toward self, the percentage of agreement between two repetitions was 82. Factual information brought a higher degree of re-test reliability than more analytic questions. Carroll reports that the consistency of responses for boys was slightly higher than for girls.

Bregman, (quoted by Thorndike, 1934, Appendix VII) reports the results of an attempt to determine the reliability of students' responses concerning duration of employment, average weekly earnings, and nature of work performed. Her procedure was to compare students' responses with verified employers' records. She reports, "Clearly the reports from employer and employee are in close agreement," and she supports her conclusion by correlation coefficients between em-

ployer and employee reports, all greater than .87. Thorndike (1934, p. 23) states that the results reported by Bregman justify the use of the testimony of individuals — "the occasional errors of pride, concealment, and carelessness do little harm to the purpose of our inquiry."

Symonds (1931, p. 161) gives us reliability coefficients and re-test coefficients for seventeen questionnaires and attitude scales. He presents also a table of reliability coefficients for subject matter tests and concludes that the questionnaire reliability figures compare favorably with them.

The reliability of the attitude scales used in our questionnaire was determined by the odd-even Spearman-Brown procedure. A study of the reliability coefficients reported in Table 14 indicates that our subjects have responded consistently on three of the scales (coefficients of .90, .65, and .63) to the extent that reliable comparisons can be made between the attitudes of our groups which have been classified on the basis of employment status. The high coefficient (.90) obtained on the unemployment scale which was answered by those who were without regular employment indicates that the subjects were more certain of their attitudes toward their situation than those who were employed. As will be shown later in this

TABLE 14
RELIABILITY COEFFICIENTS, PROBABLE ERRORS OF THE RELIABILITY COEFFICIENTS, AND STANDARD DEVIATIONS OF THE DISTRIBUTIONS OF THE ATTITUDE SCALE SCORES — EXPERIMENTAL GROUP OF THE PRESENT INVESTIGATION

Attitude Scale	r_{12}	P E. _r	σ
Toward unemployment (Response by unemployed only)	.90	.01	3.14
Toward employment (Response by employed only)	.65	.04	4.76
Towards education (Response by all subjects)	.63	.04	3.48
Existing conditions * (Response by all subjects)	.53	.05	2.00

* Since the sampling here was limited (only 5 items were considered), the response to this scale has been treated item by item in another section of the report. The low reliability coefficient appears to be due in part to the fact that items 7 and 9 in this scale were worded in a confusing manner.

report, the unemployed were disturbed about being without employment, and there was no question in their minds about being disturbed. The other coefficients reported in Table 14 are not so high as is desirable in describing individual attitudes, but are sufficiently high for the use to which they are put in this study.

In order to determine the truthfulness of the subjects' responses to the questions concerning the jobs they had secured and the salaries they were earning, letters were mailed to one hundred persons by whom our subjects had stated they were employed, asking them whether or not the students had reported their employment status correctly. The subjects whose responses were checked (twenty-five males and twenty-five females from each of the two cities) were selected at random from those who had sent in the completed questionnaires. The results of the inquiry revealed that all but one of the subjects were working at the places designated, and in no case were any of our subjects getting less than the stated salaries. These figures indicate that we can depend upon our subjects' responses to the questionnaire, that our procedure has been successful in securing dependable responses, and that the responses have been secured in sufficient quantity to make our results of considerable significance.

CHAPTER IV *

RESULTS OF THE INVESTIGATION

Introductory Statement

In the four preceding chapters we have described the source of the data, the methods used in gathering them, and the procedures utilized in getting them ready for a study of their relationships and significance.

The items of information gathered may be observed in the Summary Table 15, listing all the data utilized in describing the subjects of our investigation. Examination of this table

TABLE 15

SUMMARY OF ITEMS OF INFORMATION OBTAINED ON THE MEMBERS OF THE EXPERIMENTAL GROUP

1	Sex	2	Race	3	Town.	38	Scholastic standing (1st grade teacher's rating)
4	Year of birth					39	Arithmetic ability (1st grade teacher's rating)
5	Month of birth					40	Reading ability (1st grade teacher's rating)
6	Extracurricular activities (Junior High School.)					41	Oral expressive ability (1st grade teacher's rating).
7	Extracurricular activities (Senior High School.)					42	Performance in homework (1st grade teacher's rating)
8	Sports activities (JHS)					43	Behavior in school (1st grade teacher's rating)
9	Sports activities (SHS)					44	Home conditions (1st grade teacher's rating).
10	Club membership at school					45	Father's occupation
11	Occupational choice (JHS)					46	School entrance date
12	Occupational choice (SHS)					47	Average absences from school.
13	Work after school					48	Average tardiness while at school.
14	Date of return of questionnaire					49	Average marks (grades 1-6).
15	Employment status					50	Average marks (grades 7-9)
16	Means used in trying to obtain employment (Employed subjects)					51	Average marks (grades 10-12)
17	Occupational training					52	Highest grade reached in school
18	Future occupational plans					53	Number of years in school
19	Means used in trying to obtain employment (Unemployed subjects)					54	Reason for leaving school
20	Present position.					55	Intelligent quotient at age 8
21	Employment experience					56	Intelligent quotient at age 12
22	Salary level					57	Intelligent quotient at age 16
23	Lowest acceptable salary to accept a position or to change position.					58	Arithmetic test performance at age 8
24	Attitude toward employment and unemployment					59	Arithmetic test performance at age 12
25	School subject most valuable					60	Reading test performance at age 8.
26	School subject best liked					61	Reading test performance at age 12.
27	School training now desired					62	Standing height at age 8
28	Attitude toward existing conditions					63	Standing height at age 12.
29	Attitude toward education					64	Standing height at age 16
30	Intelligence (1st grade teacher's rating)					65	Weight at age 8
31	Ability get instructions (1st grade teacher's rating)					66	Weight at age 12
32	Concentration (1st grade teacher's rating)					67	Weight at age 16
33	Habits of work and study (1st grade teacher's rating)					68	Skeletal age at age 8
34	Behavior in plays and games (1st grade teacher's rating)					69	Skeletal age at age 12
35	Cooperation (1st grade teacher's rating).					70	Skeletal age at age 16.
36	Leadership (1st grade teacher's rating).					71	Belief in opportunity for present-day youth.
37	Nervous condition (1st grade teacher's rating).					72	Belief in retardation of youth's progress by depression
						73	Outlook for the future
						74	Belief in hard work as determiner of success.

reveals that we have obtained seventy-four items of information on each subject and that the items comprise a very complete description of the individual. For convenience we shall discuss our results in terms of the section headings of the last two chapters

It would be impossible in a study of this nature to examine in great detail all of our seventy-four items of information and to study all the relationships between them. This would involve almost a complete study of the major problems of the Harvard Growth Study (although not all the subjects and measurements of the subjects of the Growth Study have been used) and would lead us away from our main purpose, which is to seek factors in the backgrounds of youth differentiating the unemployed from those who have secured employment. The results presented in the following sections will, therefore, not exhaust all the possibilities of the data gathered, but will rather describe the main differences between various groups of employed and unemployed youth. More complete analysis of the data and further investigations will be reported in a second volume and in the final report of the Harvard Growth Study.

Employment Status

The first step in the analysis of the data was to determine the employment status of the individual as reported in his answer to the first question (see the first section of Chapter III) of the questionnaire. Responses to the six items of that question give us our main groups, and the description of the main groups comprises the most important findings of our study. The number and percentage of individuals of each sex in each of the employment groups are presented in Table 16. It will be well for the reader to familiarize himself with the groups and their numbers, since they will be used frequently. They are as follows: Group 1, Employed, 251; Group 2, Unemployed, 231; Group 3, At home, not desiring employment, 32; Group 4, Attending school or college, 384; Group 5, Employed more than half time, 148; Group 6, Employed less than half time, 314.

TABLE 16
MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Group	Boys		Girls		Total	Per cent
	Number	Per cent	Number	Per cent		
Employed all past year	152	21.4	99	15.3	251	18.5
Unemployed all past year	93	13.1	138	21.1	231	17.0
At home, not desiring employment			32	5.1	32	2.4
Attending school or college	212	29.5	172	26.4	384	28.0
Employed more than half time past year	85	12.0	63	9.7	148	11.0
Employed less than half time past year	169	24.0	145	22.4	314	23.1
Total	711	100.0	649	100.0	1360	100.0

Examination of Table 16 reveals that 18.3 per cent of our group of 1,360 subjects had found employment, 17 per cent were unemployed, 2.4 per cent did not desire employment, 28 per cent were attending educational institutions, 11 per cent had worked more than half time during the past year, while 23.1 per cent had worked some, but less than half time during the same period. Five per cent more boys than girls had secured employment but 5 per cent of the girls were at home and did not want work. (This latter group included several married women.) Two per cent more boys than girls were attending school or college. Eight per cent more girls than boys who wanted employment had failed to secure it. There is little difference between the sexes, however, so far as employment status is concerned. Both sexes have approximately the same degree of success in securing employment.

Though there are no great differences between the sexes in percentage of employed and unemployed, we have decided to treat them separately in our discussion because of the differences in kinds of employment they seek and the different opportunities offered. The findings of others further strengthened our decision, among those of Kelley (1935, p. 98), who has shown that census counts of numbers in vocations amply substantiate the claim that sex does have important vocational and social consequences.

As might have been expected, since our group was so homogeneous with respect to age, no significant differences in age between employed and unemployed groups were found.

Statistical Notes

In the following sections it will be well to note several procedures that have been utilized frequently. Especially must it be noted that we have been unable to compute the significance of every difference obtained. Since we have used seventy-four items of information for each of eleven groups and since each of the items has been subdivided into many groupings, the amount of labor involved in computing the significance of all

differences was prohibitive. It seemed to the writers that since the significance of all the differences could not be computed, it would be beneficial to report the complete distributions (from which the differences whose significance could not be computed were obtained), so that those interested in any particular distribution could make any further computations they considered desirable. In other words, we have chosen, with help at our disposal, to present data on a large group of items on which further work can be done, rather than to make minute analysis of a small number of items.

Throughout the following sections we have used three times the standard error of a difference as a critical ratio of the significance of that difference. The usual formula for standard errors of the difference between means ($\sigma_d = \sqrt{\sigma_1^2 + \sigma_2^2}$) has been used, and $\sigma_d = \sqrt{\sigma_1^2 + \sigma_2^2 + 2r_{12} \sigma_1 \sigma_2}$ for longitudinal data. For differences between percentages we have used the same formula, but the standard errors of the percentages were obtained from the formulae: $\sigma_1 = \sqrt{\frac{p_1 q_1}{N_1}}$ and $\sigma_2 = \sqrt{\frac{p_2 q_2}{N_2}}$. In the two latter formulae "p" and "q" are obtained percentages, and one hundred minus the percentages, respectively.

We have used eleven employment groups throughout the study. The reason for keeping the sexes grouped separately has been stated. The separation of our subjects into employed and unemployed groups is obvious, but the further separation of the irregularly employed groups was decided upon after examination of our distributions of "more than" and "less than" half time employed groups. We found early in the analysis of our results that there were differences between the "more than" and "less than" groups which could not be attributed to chance, and the decision to separate the groups was strengthened by the desire to investigate the question whether those who had secured positions but who had lost them (or who had secured a position for a very short time only) differed with respect to any of the items we were to study. The inclusion of all eleven groups makes the handling of the data more unwieldy and the

language difficult, but the differences obtained have been worth the effort.

The choice of percentage tables for some items (we have rounded off, with some difficulty, the percentages to total 100 in the crowded tables) and of measures of central tendency for others was made in an attempt to utilize the measures which would (a) best describe the data and (b) offer readiest interpretation for those most likely to utilize the results obtained. The latter group would not include the statistics and measurement experts (for we have not had the services of clerks who could perform the operations required by experts and desired by the writers¹), but would include, rather, those working directly with unemployed youth.

Further, due to the limitation outlined in the preceding paragraph, it has been necessary to forego the opportunity both to carry on many interesting theoretical analyses suggested by certain findings and to pursue the investigation beyond its present stage. Further analyses of the data will be presented as soon as possible in a second volume.

Employment Status, Ethnic Origin, and Residence

The results of our investigation of the relationship between employment status and ethnic origin do confirm the popular belief that certain ethnic groups are not so successful as others in securing employment. In Table 17 we present the findings concerning the relationship between ethnic origin and employment status. Reading of the table reveals that the proportions of employed and unemployed are unequal among the various ethnic groups. Some of the differences may be attributed in part to the difference in sampling, since the last three groups (South Europeans, Negro, and Mixed Groups together) compose only 6 per cent of our total population, and the Jews comprise only another 6 per cent.

¹ Frequent changes in the personnel, only one of whom had more than a high school training, brought difficulties also. The F.E.R.A. and N.Y.A. supplied the clerks for our projects.

TABLE 17
RELATIONSHIP BETWEEN ETHNIC ORIGIN AND EMPLOYMENT STATUS — EXPERIMENTAL GROUP

Employment Status	North Europeans	Italians	Jews	South Europeans	Negroes	Mixed
Employed	18 3	21 0	18 2	12.9	18 2	7 2
Unemployed	15 3	21 3	12 9	16 1	18 2	32 1
At home	2 8	1 2	2 2	3 2	0 0	3 6
Attending school	32 6	19 2	30 1	19 4	22 7	10 7
Employed part time	31 0	37 3	36 6	48 4	40 9	46 4

Between our large groups, North Europeans (65 per cent of the total population) and Italians (25 per cent), the main differences are to be found in the percentages attending school. Thirteen per cent more North Europeans than Italians are attending school or college (the difference is seven times its standard error), and 6 per cent more Italians than North Europeans are unemployed. The difference here is just three times the standard error of the difference. Nineteen per cent more North Europeans than Italians have found scholastic opportunities and employment. Such differences should be considered, for they may be of significance in studying problems and procedures for working with unemployed youth. While, on the whole, there is a great deal of overlapping among the interests and abilities of the ethnic groups, the fact remains that the treatment of each must be considered in the light both of the varying folkways and mores not obliterated completely by Americanization procedures, and of the ability differences which investigators (Estabrooks, 1926; Wentworth, 1926; Durrell, 1930), have found between the groups in intelligence test and achievement test performance.

Residence

Distributions of the members of our experimental group by cities, which are shown in Table 18, reveal no significant differences in employment status. Since there is only a very slight

TABLE 18
EMPLOYMENT STATUS OF MEMBERS OF EXPERIMENTAL GROUP CLASSIFIED
BY CITIES OF RESIDENCE

Employment Status	Per Cent City X	Per Cent City Y	Differences *
Employed	19.6	16.2	3.4
Unemployed	15.4	20.1	4.7
Home	2.3	2.4	0.1
School	30.2	24.3	5.9
Employed part time	32.5	37.0	4.5

* None of the differences is statistically significant

difference between the two cities upon the basis of socio-economic status, there would be no reason to expect any great difference in employment opportunities. In city Y, of slightly lower socio-economic level, there are 5 per cent more unemployed and 6 per cent more attending school. These are the greatest differences, and they are not statistically significant. In the remainder of the study, therefore, we shall treat our residence groups in a similar manner, regardless of the city in which they reside.

*Desire for Work, Occupational Training, and Kind of Work
Obtained*

We have shown in Table 16 that 17 per cent of our subjects were without any employment and that 34 per cent of our subjects had worked only at intervals during the past year. In order to find out whether or not these people really wanted to work and what methods they had used to secure employment, we have included in our questionnaire a list of nine common ways of trying to secure employment. We have also included an attitude scale (see Chapter III) to find out how these young people felt about being unemployed. In Table 19 are listed, in detail, the *number of methods* used in trying to secure employment by our subjects who have been grouped by employment status. In Table 20, which follows, we have listed the *most common methods* of trying to secure unemployment given by those without regular employment.

Examination of Table 19 reveals that our groups of subjects had tried on the average (mean) from 1.8 methods (employed girls) to 4.0 methods ("unemployed" girls and "less than half time" boys) of securing employment.² In the lower section of the table we find that the employed subjects were usually successful on one attempt, and only one-sixth of the members of that group were required to try more than three

² In addition, methods other than those given in the questionnaire may have been used. Only 2 per cent of over 700 unemployed youth (whole or part time) failed to indicate any methods used in trying to obtain employment.

TABLE 19
METHODS USED IN TRYING TO OBTAIN EMPLOYMENT BY SUBJECTS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOY-
MENT STATUS

Group		9	8	7	6	5	4	3	2	1	N	M*
Employed	Boys	1	1	3	2	7	9	10	17	76	126	21
	Girls			1	2	4	5	8	7	65	92	18
Unemployed	Boys	1	5	8	8	8	12	14	13	15	84	39
	Girls	3	11	8	11	24	15	19	12	29	132	40
Employed more than half time	Boys	2	3	6	8	8	5	10	14	27	83	33
	Girls		2	2	7	4	8	10	7	20	60	31
Employed less than half time	Boys	6	10	9	23	29	20	10	18	42	167	40
	Girls	6	6	5	13	18	24	17	17	34	140	37

* Mean number of methods used in trying to secure employment.

methods. These figures present a contrast with "unemployed" and "less than half time employed" figures. Over half of the members of these latter groups had used more than three methods. The figures presented in Table 19 indicate beyond doubt that our subjects *do want to work and are not too discouraged to stop searching for jobs when the first few trials at job-getting are unsuccessful.*

The methods of trying to obtain employment most commonly used by our subjects are reported in Table 20. It is significant that the school authorities are appealed to least. The public employment agency stands high in favor among the groups that have secured employment, either whole or part time, but the private agency is near the bottom in all lists. Appeals to friends and relatives have approximately the same ranks in each group, but both follow the public employment agency. All groups except the employed utilize the help wanted ads for the most common or second most common methods. The order of choice for most groups appears to be (1) answering newspaper ads, (2) applying at public employment agencies; (3) making personal application to business houses; (4) appealing to friends or relatives; (5) appealing to employers of other members of the family; (6) applying at private employment agencies, and (7) applying to school authorities. The differences between percentages of groups using various methods are too slight to differentiate the employment groups sufficiently to establish distinctly the advantage of one method over any other, except in the case of the wholly unemployed. This latter group uses the public employment agency slightly less than half as often as those who have secured either full or part time employment. (The difference in percentages does not quite reach our criterion of significance.) With the exception of the public employment agency, however, none of the other methods appear to possess any superior advantage in securing employment.

Further evidence of our subjects' desire for employment is found in the response to our attitude scale, in which the "un-

TABLE 20

METHODS OF SECURING EMPLOYMENT MOST COMMONLY USED BY MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Employed	%	Unemployed		Employed	
			%	More Than Half Time	%
Applied to public employment agencies	14.2	Appealed to members of the family	16.2	Answered help wanted ads	15.8
Appealed to employers of members of family	13.9	Answered help wanted ads	14.1	Applied in person to business houses	14.3
Appealed to friends of the family	13.8	Appealed to friends of the family	13.4	Applied to public employment agencies	12.9
Applied in person to business houses	12.8	Applied in person to business houses	13.0	Appealed to friends	12.6
Answered help wanted ads	11.9	Appealed to employers of members of family	12.9	Appealed to employers of members of family	11.3
Appealed to friends	11.2	Appealed to relatives	10.8	Appealed to friends of family	10.7
Applied at private employment agencies	9.2	Applied to public employment agencies	8.8	Appealed to relatives	10.9
Appealed to relatives	8.6	Applied to private employment agencies	8.4	Applied at private employment agencies	8.3
Appealed to school authorities	4.4	Appealed to school authorities	7.8	Appealed to school authorities	3.1
			3.0		

employed" and "less than half time employed" subjects were required to express their feelings about not being able to find work. The results reported in Table 21 were obtained from a summary of eleven questions in which the student expressed his opinions on a continuum extending from *being perfectly satisfied to be unemployed*, to feeling that *it is extremely unjust and unfair to keep me unemployed*. The reliability of the response to the continuum has been reported in Chapter III as .90. We have averaged the scores obtained to give us a five-point division, as reported in Table 21.

The figures in the table indicate that 94 per cent of our unemployed subjects *dislike and strongly dislike* being unemployed.

TABLE 21

ATTITUDE TOWARD UNEMPLOYMENT EXPRESSED BY SUBJECTS OF THE EXPERIMENTAL GROUP

	Per Cent Unemployed		Per Cent Employed Less Than Half Time	
	Boys	Girls	Boys	Girls
Strongly dislike being unemployed	44	50	25	21
Dislike being unemployed	50	44	44	53
Undecided how I feel about being unemployed	5	5	19	14
Don't mind being unemployed	1	1	11	11
Perfectly satisfied about being unemployed	0	0	1	1

Forty-four per cent of the boys, and 50 per cent of the girls *strongly dislike* being unemployed. Only 5 per cent are undecided. One per cent of the members of our group *don't mind* being unemployed, and none of our unemployed subjects are satisfied to be without work. The differences between the "unemployed" and "less than half time employed" indicate that the dissatisfaction about lack of employment increases significantly when even less than half time positions are secured.

The "less than half time" group are not so pronounced in

their feelings of dissatisfaction about their lack of regular jobs. Sixty-nine per cent of this group of boys and 74 per cent of the girls dislike being without employment. Nineteen per cent and 14 per cent of boys and girls, respectively, are undecided, while 12 per cent of each group *don't mind* being unemployed. Only 1 per cent of the irregularly employed group members state that they are perfectly satisfied to be without work.

The figures show beyond all reasonable doubt that our subjects do want to work. When we combine the information presented in this last table with the information presented in the two previous tables concerning the methods and numbers of methods utilized in attempts to secure jobs, we can feel sure that the vast majority of the young people from whom our sampling was drawn *do want to work*.

Since there can be little doubt that our subjects do want jobs, we may then ask just how well they are prepared to take any work that is offered. The answer to the question is found in Table 22, which follows. In this table we have recorded the percentages of our subjects who stated that they had the occupational training listed. The first line brings out a point discussed at some length in a later section — the fact that a large percentage of our girls of all "employment" groups (and even the "school" group) consider themselves trained for commercial work. Forty-nine per cent of our "unemployed" girls, 43 per cent of the "more than half time" and 53 per cent of our "less than half time" girls are trained in (and, we shall show later, want more training in) the commercial field. The need for guidance is apparent, when consideration is given to the number of unemployed who have had commercial training.

The second largest group contains the "sales" group. Twenty-seven per cent of employed boys and from 17 to 24 per cent of our unemployed and irregularly employed boys have had some training in salesmanship. Twenty-one per cent of our unemployed girls and 11 to 12 per cent of the irregularly employed girls have had sales experience, while 14 per cent of

TABLE 22

OCCUPATIONAL TRAINING OF SUBJECTS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent at School		Per Cent Employed More Than Half Time		Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Clerks, stenographers, general office work	13	50	8	49	39	40	12	40	16	43	11	53
Domestic work, cook, mother's helper	2	10	1	15	28	—	—	14	1	15	—	12
Dressmaking	—	4	—	4	4	—	—	7	—	5	—	5
Hardressing, beautician	1	6	1	—	7	—	—	2	—	6	—	3
Store clerk, sales clerk	27	14	17	21	7	14	23	14	24	11	24	12
Commercial art and writing	3	—	2	1	4	3	6	3	—	—	1	—
Printing, engraving, photography	5	1	3	—	—	—	4	1	2	—	2	1
Auto repair work, mechanic, toolmaker	15	—	18	—	—	—	10	—	18	—	20	—
Agricultural work, forestry	7	—	9	—	—	—	6	—	4	—	3	—
Electrical work, service and repair	7	—	5	—	—	—	8	1	6	—	4	—
Carpentry and industrial painting	3	—	13	—	—	—	6	—	4	—	10	—
Miscellaneous (filled in by subjects)	17	15	23	10	11	18	25	18	25	20	25	14

the employed girls fall into the same class. It appears that training in the commercial (including sales) fields is no guarantee that employment will be obtained.

The group of girls who are trained in domestic work are distributed among all employment groups, as are also the boys who have mechanical training. The remaining groups of subjects are so sparsely distributed that we cannot determine the significance of the differences between employment status groups. The differences do, however, indicate that the possession of training in any kind of work represented in our table does have very little to do with the securing of employment. We are not able, from the data with which we are working, to determine whether excellence of training is a deciding factor in securing a position. We must limit ourselves, therefore, to the statement that training or lack of training, as defined by our subjects, is *not* a factor which differentiates our subjects into employment status groups.³

The positions which our employed subjects have secured are listed in Appendix III. A study of them reveals that the positions in which they are working are largely at the day laborer and semiskilled level.

Wages and Job Satisfaction

The median wage and the distribution of wages which our subjects have obtained are presented in Table 23. "Regularly employed" and "more than half time employed" boys get a median wage of \$15 to \$18 per week; the "less than half time" boys and all groups of girls get a median wage of \$11 to \$14 per week. The range extends from less than \$6 to \$30 or more per week for boys, and from the same minimum to a maximum of \$30 for girls.

³ We do not find confirmation of the conclusions of the Connecticut State Employment Service, which reports that 73 per cent of the young people seeking jobs through the employment offices were untrained for any skilled occupation, and that 40 per cent were untrained for any kind of work. All our subjects *think* that they have some training. We have no direct evidence that all our subjects *were* trained, however.

TABLE 23
WEEKLY WAGES OF THE SUBJECTS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Wage	Per Cent Employed		More Than Half Time		Per Cent Employed		Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
\$30 or more per week	2	—	3	—	—	—	—	—
\$25 to \$30 " "	5	1	1	—	—	—	—	—
\$22 to \$25 " "	4	—	4	2	1	—	—	—
\$19 to \$21 " "	6	4	11	4	6	—	—	—
\$15 to \$18 " "	39	31	31	27	29	14	—	—
\$11 to \$14 " "	23	48	24	35	25	49	—	—
\$ 7 to \$10 " "	15	8	20	19	25	24	—	—
\$ 6 per week or less	5	8	6	13	13	13	—	—
Room and board in addition to wages	1	8			1			
Median wage level per week	\$15 to \$18	\$11 to \$14	\$15 to \$18	\$11 to \$14	\$11 to \$14	\$11 to \$14	\$11 to \$14	\$11 to \$14

The wages listed in the above table are not high, and half of our subjects are getting less than what would appear to be a living wage. It may, then, be just the satisfaction of having any kind of job that makes our subjects express a favorable attitude (Table 24) toward their positions.

Fifty-two per cent of our employed boys and 63 per cent of our employed girls like their work, although only 12 per cent of each group are enthusiastic about it. Thirty-one per cent of the employed boys and 21 per cent of the employed girls have

TABLE 24
ATTITUDE EXPRESSED TOWARD THE EMPLOYMENT OBTAINED BY SUBJECTS
OF THE EXPERIMENTAL GROUP

	Employed		Employed More Than Half Time	
	Boys	Girls	Boys	Girls
Like the work very much	12	12	7	14
Like the work	40	51	52	42
Undecided whether like or dislike the work	31	21	30	36
Dislike the work . .	15	15	11	8
Strongly dislike the work	2	1	0	0

not decided whether or not they like their jobs. Fifteen per cent dislike their positions, while 2 per cent of the boys and 1 per cent of the girls find their work *very distasteful*.

Of the "more than half time" group, 59 per cent of the boys and 56 per cent of the girls like their work. Twice as many girls as boys are enthusiastic about their positions. Thirty and 36 per cent of this group are undecided whether they like or dislike their work, while 11 and 8 per cent of the boys and girls dislike what they are doing. None of the "more than half time" group strongly dislike their work.

If the reader will turn to Appendix II again, in which are listed the occupations of those who are employed, he will be forced to decide that either our subjects have not acquired a desire for work in the higher than semiskilled groups or they are so thankful to have any kind of job that most of them like whatever they can get. Since we shall show in the following

section that our subjects do, as a whole, aspire to even higher occupational levels than the skilled trades, we must accept the other alternative — that our subjects like whatever kind of work they can find. Since our “employed” subjects are largely of mediocre ability (so far as we have measured it) and since their occupational sights were aimed much too high, it may be that the lack of wide opportunity to choose between occupations has been somewhat fortunate in forcing many members of our group into occupations for which their limited ability fitted them (and which they like) but which they might not otherwise have considered because of too great ambition.

It must not be considered here that our subjects are all working in the occupations for which they are best fitted, for we have no adequate measures of their abilities other than those obtained from records and tests of scholastic achievement and aptitude. Since liking one’s job is, however, an important qualification in defining vocational fitness, it may well be a fortunate circumstance that our subjects were forced to take what they could get — unless, again, the expressed favorable attitude toward their jobs is not just an expression of thankfulness for having any kind of employment

Vocational Choice at the Junior, Senior, and Post-High-School Levels

The subjects of our investigation have had three opportunities to express their vocational choices. At the junior high school level and at the senior high school they have responded to questionnaires, among the items of which were questions concerning the occupations they intended to enter. After completion of their high school careers they were again asked to state in what occupation they expected to be working five years from the date of answering the questionnaire (autumn, 1935).

The occupational choices of the subjects and the occupations of their fathers were grouped into seven categories of the Rulon (1933) modification of the Minnesota Child Welfare Occupational Classification Scale, which is a classification of the

United States Census occupational listings. We have inverted the order of the listings used at Minnesota and by Rulon, so that our groups are listed as follows:

- Group 1. Day laborers
- “ 2. Slightly skilled trades
- “ 3. Semiskilled trades, minor clerical and
minor business
- “ 4. Farming
- “ 5. Clerical, skilled trades, retail business
- “ 6. Semiprofessional
- “ 7. Professional

The percentages of the population of the United States as a whole; of Massachusetts, where our subjects resided, of the fathers of our subjects, and of our subjects' choices in each of the seven occupational groups are presented in Table 25. Examination of this table reveals that there are significant differences between the percentage of students who chose the occupational groups at the three levels and the percentage of workers engaged in the various occupations in the United States as a whole. The differences confirm a rather common idea that students do not choose occupations with adequate knowledge of the need for workers in these occupations. The figures in Table 1, however, indicate that the choices become slightly nearer to actual occupational requirements as time passes.

Referring again to the table, we see that our subjects chose the occupations at the upper (professional) end of the scale. Ninety per cent at the junior and senior high school level, and 75 per cent at the post-school level choose the three upper occupational classifications, while only 24 per cent of the workers in the United States and 30 per cent of the workers in Massachusetts are employed in these groups. When we remember that the means of the intelligence quotients of our subjects at ages eight, twelve, and sixteen years of age are 103.8, 99.3, and 97.5, we realize the seriousness of this tendency to choose the upper ends of the occupational scale.

TABLE 25

PERCENTAGE OF POPULATION OF UNITED STATES AND MASSACHUSETTS — PERCENTAGE OF FATHERS OF THE SUBJECTS OF THE EXPERIMENTAL GROUP ENGAGED IN EACH OF SEVEN OCCUPATIONAL GROUPS — CHOICE OF THE OCCUPATIONAL GROUPS BY SUBJECTS OF THE INVESTIGATION AT THE JUNIOR HIGH, SENIOR HIGH, AND POST-HIGH SCHOOL LEVELS

Group	* U S	* Mass.	Father's Occupation	Choice Junior High	Choice Senior High	Choice for 1940
I Day laborers	17.1	9.6	6.1	0.1	0.0	1.4
II Slightly skilled	12.2	8.7	9.1	0.3	0.5	0.8
III Semiskilled						
Minor clerical	34.6	50.0	34.0	7.3	6.6	20.6
IV Farming	12.5	1.3	1.2	1.4	1.6	1.4
V Clerical-skilled trades	14.8	19.6	37.8	25.0	26.4	33.2
VI Semiprofessional	4.4	5.7	6.8	34.8	34.1	14.3
VII Professional	4.4	5.7	5.0	31.1	30.8	28.3
N**			574	704	640	591

* Census of 1930.

** The difference in population is due to the fact that some of the students were absent when the questionnaires were filled out. Approximately 550 students are common to all three groups.

Certainly a large proportion of our groups are too limited in mental ability to reach and succeed in the occupational levels which they have chosen.

The large decrement from the 34 per cent who chose the semiprofessional occupations at the junior and senior high school levels to the 14 per cent who chose the semiskilled, minor clerical, and minor business occupation at the post-school level is significant. The decrement is due, probably, to the fact that our subjects, on leaving school, had found jobs at lower levels and saw no hope of improving their positions during the coming five years.

The consistency with which the farming group is avoided is due in all probability to the fact that our subjects resided in two industrial and residential communities of New England.

It should be of considerable interest to guidance people to know to what extent there is relationship between fathers' occupations and vocational choice of students (who have had no vocational guidance) and the extent to which the relationship remains constant over a period of years. In order to indicate these relationships we have reported the scattergrams obtained by plotting the occupational choices of our subjects at various levels against their fathers' occupations, and also the occupational choice at one time against choice at another. We have also computed the coefficients of contingency from these distributions.

The scattergrams should be observed, first. From the first scattergram we read: "Of the 198 students who chose occupational group seven (professional) at the senior high school level, two chose group three (semi-skilled), one chose group four (farming), 20 chose group five (clerical, skilled trades), twenty-eight chose group six (semi-professional), and 147 chose group seven (professional), at the junior high school level." None of the subjects chose group one (day laborers) at the senior and junior high school levels, and only two subjects at either of these levels chose the lower of the two occupational groups. Although the above has been given as direction

Occupational Choice
Junior High School

	1	2	3	4	5	6	7	N
7			2	1	20	28	147	198
6			7	1	26	151	33	218
5		1	7		108	31	22	169
4				5	2		3	10
3			12	1	12	15	2	42
2		1				1	1	3
1								
N		2	28	8	168	226	208	640

Coefficient of Contingency = .738

Occupational Choice
Junior High School

	1	2	3	4	5	6	7	N
7			2	1	5	11	18	37
6			4	2	8	22	25	61
5			11	2	60	89	62	224
4				1	2	3	2	8
3	1	1	24	3	74	96	86	285
2			6	1	12	10	17	46
1		1	4		15	14	9	43
N	1	2	51	10	176	245	219	704

Coefficient of Contingency = .215

Occupation Choice for 1940

	1	2	3	4	5	6	7	N
7		1	3		11	10	21	46
6	2		9	1	25	9	26	72
5	7	3	60	4	89	38	52	253
4		1	6		2	3	2	14
3	15	5	91	6	96	52	74	339
2	2	1	23	1	15	8	15	65
1	10	4	23	2	15	5	9	68
N	36	15	215	14	253	125	199	857

Coefficient of Contingency = .160

Occupational Choice
Senior High School

	1	2	3	4	5	6	7	N
7			3	5	22	38	99	167
6			1		16	43	25	85
5			16		63	78	39	196
4			1	2	1	1	3	8
3			17		45	32	28	122
2		1		1		2	1	5
1			2		2	4		8
N		1	40	8	149	198	195	591

Coefficient of Contingency = .574

Occupational Choice
Senior High School

	1	2	3	4	5	6	7	N
7			1	1	5	12	16	35
6			3	1	8	18	22	52
5		1	11	4	53	70	56	195
4					2	3	2	7
3		2	19	2	54	73	67	217
2			3		11	14	11	39
1			2		10	8	9	29
N		3	39	8	143	198	183	574

Coefficient of Contingency = .278

Numbers outside the scattergrams refer to occupational levels, numbered as follows

- Group 1 — Day laborers
 " 2 — Slightly skilled trades
 " 3 — Semiskilled trades,
 minor clerical, and
 minor business
 " 4 — Farming
 " 5 — Clerical, skilled trades
 — retail business
 " 6 — Semiprofessional
 " 7 — Professional

for reading the first scattergram, the statements emphasize one factor that is revealed in all cases — the tendency to avoid the two lowest classifications in the occupational scale. In all but the last scattergram over half of the choices are in the professional and semiprofessional groups. In the choices for 1940 there is a tendency to move nearer the lower end of the occupational scale, and we get a better distribution of choices — perhaps the result of better knowledge of occupational demands and subjects' knowledge of their own possibilities.

The coefficient of contingency between choice at the junior and senior high school levels is .738, and the contingency between the senior and post high school choices is .574 (The possible coefficients in view of the number of categories are .936 and .913.) The obtained coefficients indicate that there is no marked consistency in choice of occupation at the junior and senior high school levels. The contingency coefficient of .738 indicates that in general students do not change their choice of occupational classification⁴ during the junior and senior high school periods. The lessening consistency in choice at senior high school and post-high school levels is indicated by the coefficient of .574.

The relationships between father's occupations and occupational choice may be observed from the last three scattergrams. If there were close relationships between occupational choice at the three levels, they would be indicated in the scattergrams by a straight line of figures from the lower left to the upper right hand corners. None of the distributions approach this alignment, indicating that there is not a close relationship between father's occupation and occupational choice at the junior, senior, and post-high-school levels. The possible coefficients of contingency with seven categories are .936. The computed coefficients of .215, .278, and .160 confirm the conclusion derived from observation of the scattergrams, namely, that the students do not choose their fathers' occupations. The rela-

⁴It should be noted that there were changes within an occupational level, but the level of choice is significantly constant

TABLE 26

OCCUPATIONAL CHOICES OF THE SUBJECTS OF THE EXPERIMENTAL GROUP AT THE JUNIOR, SENIOR, AND POST-HIGH SCHOOL LEVELS — SUBJECTS CLASSIFIED BY PRESENT OCCUPATIONAL STATUS

	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent at School		More than Half Time		Per Cent Employed Less than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Junior High Choice												
1 Day laborers . . .											3	
2 Slightly skilled												
3 Semiskilled, clerical	7	6	3	11		12		4		12	10	7
4 Farming . . .								4	1			1
5 Skilled trades . .	37	34	38	19		38		20	12	37	22	30
6 Semiprofessional	21	46	22	51		38		12	48	16	40	32
7 Professional	35	14	33	17		12		55	35	35	25	30
												21
Senior High Choice												
1 Day laborers . . .												
2 Slightly skilled												
3 Semiskilled, clerical	5	10	3	10		15		4	5	8	3	1
4 Farming . . .								5				15
5 Skilled trades . .	42	38	25	34		47		19	13	40	26	20
6 Semiprofessional	16	38	25	48		23		16	44	22	54	42
7 Professional . . .	32	14	34	8		15		55	38	30	17	35
												25
Choice for 1940												
1 Day laborers . . .	3	6	8	4				3		7	10	3
2 Slightly skilled	3		3	1				1		2	2	7
3 Semiskilled, clerical	29	29	33	31		34		11	10	29	24	40
4 Farming . . .	5		2					3	1	2		2
5 Skilled trades . .	23	43	22	45		22		15	30	33	34	24
6 Semiprofessional . .	29	17	8	12		22		12	26	12	18	12
7 Professional . . .	18	5	24	7		22		55	33	15	12	11

tionship between father's occupation and vocational choice is closest at the senior high school level and least close at the post-school level, although at no time is the relationship close enough to allow prediction of choice of occupational level on the basis of knowledge of father's occupation

Employment Status and Education

The report of the Commission on the Reorganization of Secondary Education appointed by the National Education Association, which was issued in 1928, lists among its seven main objectives of education the preparation for a vocation. The following statement, taken from the report of the Commission (1928, p. 7) makes clear its stand on this matter:

Education should equip the individual to secure a livelihood for himself and those dependent on him, to serve society well through his vocation, to maintain the right relationships towards his fellow workers and society, and, as far as possible, to find in that vocation his best development. This ideal demands that the pupil explore his own capacities and aptitudes, and make a survey of the world's work, to the end that he may select his vocation wisely.

The statements made by the Commission were widely distributed and for many people became *the* cardinal principles of secondary education. The statements, however, were not new but simply a formulation of a belief that has been held for many years — a belief that the school should help students to select their vocations and make some preparation for them. The theory underlying the belief is, of course, that the longer the period of school attendance and the better the performance during that period, the better the possibilities of securing a position and of being more successful in it.

Spaulding (1936) gives us evidence, however, that the school has not educated for vocational competence. He states:

The attention that schools paid to guidance and to vocational education was a sort of optional attention — something that conscience led progressive schools to undertake, but that

schools in general were not forced to bother with unless they felt so inclined . . . But a return even to what we like to think of as "normal" conditions is not likely to do away with one paramount fact, namely, that the world outside the school is increasingly less well suited to provide an independent place for any boy or girl who has not acquired at least the beginnings of vocational competence. To this fact must be added another: that no institution except the school can be counted on to offer boys and girls the initial vocational education which they will need. On these two facts together rests America's present challenge to the senior high school so far as vocational education is concerned. The development of initial vocational competence bids fair to assume an importance quite unprecedented thus far in educational history.

The purpose of this section is to report to what extent school attendance and performance have enabled students to secure positions, to secure better positions, and to hold and enjoy those they have secured. We shall report in this section the relationship between several educational factors and employment status.

School Attendance

It was possible to secure from school records and the records of the Harvard Growth Study information concerning the number of years that our subjects had remained in school. In the next table we have grouped, for convenience, records of the number of years spent in school, the highest grade reached, the average absences during the school year, and the tardiness records of our subjects. We have reported percentages, rounded off to whole numbers, in the first of these two groupings so that the reader may observe the distributions in detail.

Examination of the "years spent in school" section of the table reveals that there are no great differences among our employed and unemployed subjects, although there are, of course, significant differences between both employed and unemployed groups and the members of the group who are still attending school. Among the employed group we find 22 per cent of the boys and 21 per cent of the girls who have had

TABLE 27
SCHOOL ATTENDANCE RECORDS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Years in School	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent in School		Per Cent More Than Half Time		Employed Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
5	1		2		3		1		1		1	1
6	2	1	3	2	6		1			2	2	
7	4	2	5	2				1	1	2	4	1
8	8	5	2	4	10			1	4	8	3	1
9	8	15	6	10	10		2	1	8	13	11	9
10	12	11	15	6	6		2	1	10	13	13	11
11	10	3	17	16	14		1	4	14	7	9	10
12	40	42	37	48	41		18	28	42	42	40	49
13	10	18	10	12	10		54	43	16	10	15	14
14	6	3	3				22	19	4	3	2	4
Total per cent 12 yrs. or more	66	63	50	50	51		94	90	62	55	57	67
Highest Grade Reached												
Grade I-VI	4		5	3	6			2	2	2	5	3
VII-IX	22	22	19	17	31		1	2	15	25	23	14
X	5	9	18	8	13		7	2	8	9	12	8
XI	10	4	7	6			7	3	4	2	7	4
XII	47	52	39	58	44		37	42	59	47	44	57
1 year college	2	3	2	1	3		19	15	4	2	3	2
2 years college	1		1	1			11	9	1			
3 years college	1						3	1				
1 year special school	7	10	6	4	3		11	19	6	13	4	9
2 years special school	2		3	2			4	5	1		2	1
Mean absences per year	11.6	10.6	13.5	11.9	14.7		9.8	10.4	11.3	10.1	14.1	11.9
Mean tardiness per year	2.7	2.4	3.6	2.7	2.7		2.7	2.1	3.3	1.8	3.9	2.1

more than twelve years of school experience. Twenty per cent of the "more than half time" boys, 13 per cent of the girls in the same group, 17 per cent of the "less than half time employed" boys, and 18 per cent of the girls of the same group have had more than twelve years in schools of some kind. Only 13 per cent of the unemployed boys and 12 per cent of the unemployed girls have had more than the twelve years in school. There is, then, a suggestion that training beyond the usual twelve years of school training is helpful in securing employment. The unemployed have had less training beyond the twelve customary years than the "school," "employed," and "part-time employed" groups.

The total percentages of those who had attended school twelve years or more, presented in Table 27, indicate a difference between employed and unemployed boys of sixteen percentage points. This difference is only 2.5 times the standard error of the difference and is of doubtful significance.

The grouping at the twelfth year of school experience is to be noted. Among all but school groups there is at the twelfth year a difference of only twelve percentage points (seven of the eight differ only five percentage points) between the groups of whole or part-time employed.

But number of years in school does not indicate the extent to which our subjects have profited by their experience in school. Nor is the grade attained a good measure, because many students may have been promoted whether or not they were ready for the next grade. The first row in the second part of Table 27 tells us nothing of significance, but the second row reveals that almost one-fourth of all groups (except the school group) stop school at the junior high level. More, but not significantly more, of the regularly employed than the fully unemployed stop at the junior high. There are no significant differences between the various groups in amount of senior high school training, as the percentages in the small parentheses (62, 65, 72, 58, 63, 69) indicate, except in the cases of the small groups of "at home" girls and the "school" groups.

A study of the mean absences shows a range among the groups other than the "at home" and "school" groups of only 4.6 days. The boys have slightly more absences than girls, and the unemployed boys and girls more absences than the "employed less than part-time" group. The "school" group members have less mean absences, and the "at home" group more than any other. None of these differences meet the criterion of statistical significance which we have adopted.

Just what the small differences mean it is difficult to say without further data concerning the effect of regular attendance upon achievement and school progress. Ziegler (1928) concluded that school attendance, school progress, and school achievement are not simple relationships which can be interpreted as direct causes and effects. Odell (1923) finds that although attendance does condition achievement it is not so weighty a factor as many have believed. If, as Cooper (1930) has pointed out, parental indifference, illness, and work are the causes of non-attendance, we may have an indication here of unsatisfactory home or parental conditions which may be a factor in the securing of employment later. All that we can state here is that there are slight but not statistically significant differences in school attendance between "school," "employed," and "unemployed" groups.

The range of times tardy for the six groups of boys is 12, with the employed group least tardy during their school careers. For girls the range is 0.9 times tardy, and there are no significant differences between any of the groups of girls. We have stated in Chapter II that the tardy records were not always accurately kept, so that the small differences and short ranges found here can not be interpreted as being of significance in differentiating employed and unemployed groups.

Our Table 27, then, reveals very little of significance in the differentiating of employed and unemployed youth at the post-school level on the basis of their years in school, highest grade reached, absences, and tardiness records. A little longer training in special schools, a little more regularity in attendance,

TABLE 28

MEANS AND SIGMAS OF AVERAGE SCHOOL MARKS OF THE EXPERIMENTAL GROUP CLASSIFIED BY OCCUPATIONAL STATUS

Employment Status		Grades I to VI		Mean Teachers' Marks *		Grades X to XII	
		M	σ	M	σ	M	σ
Employed	Boys	50	15	52	10	51	16
	Girls	56	18	63	16	61	14
Unemployed	Boys	50	18	48	15	44	18
	Girls	56	14	60	16	57	16
At home	Girls	60	16	63	17	60	13
At school	Boys	54	16	60	13	54	17
	Girls	62	19	66	22	64	14
Employed more than half time	Boys	50	14	53	16	48	16
	Girls	54	20	63	18	60	19
Employed less than half time	Boys	43	14	48	19	50	12
	Girls	56	15	59	14	55	14

* To avoid minus signs and for coding purposes a constant has been added, and the marks have been grouped. In reading the table the absolute figures do not have meaning. It is the relative performance of the groups that we are considering here, and the figures bring out relative performance in a very simple form.

and a little less tardiness describes the school attendance of the employed when compared with the unemployed. It must be pointed out, however, that even the general trend of insignificant differences is of doubtful value in differentiating the groups and that the distributions are so similar that nothing can be said about individual cases. *In our data we can find cases of employed youth who have spent twelve years getting to the junior high school level, who have been absent much and tardy often, and in the same data we find youth with excellent school records who can find no employment.*

School Performance

Our records of achievement include teachers' marks, teachers' ratings, objective test scores, and records of participation in the so-called extracurricular activities. The procedure for evaluating teachers' marks has been outlined in Chapter II. In Table 28 we have listed the mean marks obtained by our subjects for their period of school attendance. The figures listed in the table show the superiority of the "school" group and the superiority of girls, but show us no significant differences between employed and unemployed groups. Apparently, teachers' marks over the twelve-year school period do not differentiate groups who are destined to be among the unemployed rather than the employed in a period in which there are not enough jobs for all. The "less than half time" boys are inferior in the early years, but in the senior high school their performances are equal to those of their fellows who are employed. The factors which determine teachers' judgments of students' performance are not, it appears, operating in the employment situation. It must be noted here that these are average marks which may hide special abilities and disabilities. We are not able to deduce from our data whether or not a special aptitude for a particular school subject is a potent factor in determining employment status.

In Table 29 we have recorded the performance of our subjects on standardized tests of reading and arithmetic at two

TABLE 29

PERCENTAGE OF EXPERIMENTAL SUBJECTS GROUPED BY EMPLOYMENT STATUS, ACCELERATED, AT NORM, AND RETARDED IN READING AND ARITHMETIC AT AGES 8 AND 12

Reading	Age	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent in School		Per Cent More Than Half Time		Employed Less Than Half Time
		8-0	12-0	8-0	12-0	8-0	12-0	8-0	12-0	8-0	12-0	
<i>Accelerated</i>												
More than 2 years	..	21	15	10	11	12	9	26	28	18	18	17 13
18-23 months	.	9	5	11	8	6	9	9	5	6	5	9 5
"		5*	6	12	5	12	4	11	7	12	5	11 8
"	..	4	12	10	10	12	4	12	6	13	6	9 7
6 months, plus or minus norm	19	24		19	18	22	28	17	18	20	25	22 18
<i>Retarded</i>												
6-11 months		12	12	7	7	6	4	12	12	17	11	6 15
"	.	12	5	15	12	6	10	3	9	6	17	8 8
"		7	5	9	10	12	4	4	7	5	2	10 7
More than 2 years		8	16	7	19	12	28	6	8	3	11	8 19
Arithmetic												
<i>Accelerated</i>												
More than 2 years		6	20	6	17		14	3	21	4	19	5 10
18-23 months	..	3	11	4	6	16		8	10	4	8	2 6
"	.	8	10	12	9		9	15	10	11	13	8 11
"	.	11	13	20	10	21	14	16	10	17	11	14 12
6 months plus or minus norm	33	18		35	19	26	4	30	19	28	23	26 22
<i>Retarded</i>												
6-11 months	.	17	10	9	9	11	14	14	10	14	8	19 11
"		10	6	6	10	11	4	6	8	9	7	12 9
"	.	4	4	5	5	5	9	4	5	7	2	6 6
More than 2 years	.	8	8	3	15	10	23	4	7	6	9	8 13

stages in their academic careers. As we have pointed out in Chapter II, the differences between the percentages at years eight and twelve may be artifacts due to the test situation. Table 29 is of value only for making comparisons between the groups which have been classified by employment status. The comparisons made there reveal again that there is little difference between employed and unemployed subjects in reading and arithmetic test performance and again emphasize the superiority of the "school" group. Disregarding the small "at home" group, which is comprised of only thirty-two subjects, the percentages at the norm in reading and arithmetic are so similar that no significant differences are obtained. At both the accelerated and retarded extremes of the distributions the similarity in percentages is again marked. So marked are the similarities and so insignificant are the differences that we can be sure that reading and arithmetic ability, as measured by the tests used in this study, are not related to the future employment possibilities. A partial explanation of these findings reported may be found by examination of the occupations (Appendix II) of those employed. It seems unlikely that any of the types of employment our subjects have found require more than elementary-school reading performance, and only occasionally do they require more than an elementary knowledge of arithmetic. It is not likely, then, that superior or inferior reading and arithmetic ability would be an important factor in determining the selection of applicants for employment.

School Activities

It has often been argued that what the student gets out of his school career cannot be adequately measured by teachers' marks or standard tests, because they may not tell us anything of the extent of socialization carried on or the values obtained from the so-called extracurricular activities. We have, therefore, computed the percentages of the members of each group who have earned points in political and sports activities while at school, and in order to show the extent of

Political Offices Held
(Senior High School)

0	81	77	72	94	100	72	77	76	67	83	90
1	7	12	17	5		11	15	14	13	6	6
2	8	6	5	1		5	6	4	15	5	2
3	3	3	2			7	2	6	3	5	2
4	1	2	2			2	2		2		
5						1				1	
6						2					
7			2								

TABLE 31
PARTICIPATION IN SPORTS BY SUBJECTS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Points Earned in Sports	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent at School		Per Cent More Than Half Time		Employed Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Junior High School												
0	43	56	38	61	60		42	56	40	41	41	50
1	10	11	13	7	25		10	9	16	4	16	7
2	19	3	18	6	5		12	9	15	10	8	22
3	10	4	9	5			8	7	5	7	8	4
4	9	9	9	2			6	4	5	2	6	4
5	5	5	2	2	5		5	6	3	4	4	2
6	4	5	4	4	5		4	1	8	8	8	4
7	1	1	4	4			3	2	3	2	2	2
8	1	1	2	5			4	1		6	3	1
9	4	4	5	3			5	2	5	4	3	2
10	4	1		1			1	3		12	1	2
Senior High School												
0	63	83	69	89	86		61	84	64	71	64	84
1	7	9	7	2	7		11	5	12	13	11	8
2	7	2	5	1	6		7	1	8	3	7	4
3	10	2	7	3			9	4	8	3	9	1
4	8						5	2			3	
5	3		8					1	2		4	
6	1	2		1			2	1	2			2
7			2	1			3		2		1	
8	1						1	2				
9				2							1	
10		2	2	1			1				5	5

extracurricular participation we have presented at great length in Tables 30 and 31 full details concerning the points earned.

The "club membership" distributions for all groups are so similar that the percentages of subjects earning one to four points (and it is probably true that the desultory nature of club work in schools will not allow differences of less than four points to become significant) extend over a range of only ten points for the eleven distributions. Of the employed boys, only 12 per cent earned more than four points, whereas 15 per cent of the unemployed boys and 16 and 15 per cent of the part-time groups, respectively, earned more than four points.

In "sports" points earned the differences between the percentages of employment groups are not statistically significant. Girls, however, earned significantly fewer points than boys at the junior and senior high school levels, and both boys and girls earned fewer points at the senior than at the junior high level. Both sets of differences are probably due to the effect of school regulations, which are less severe for girls, and less required for both boys and girls in the higher school grades.

It is significant for educators that there is a pronounced tendency for students to discontinue in the senior high school the political, social, and sport activities that are begun in the junior high school. There is no significant information to be found, however, in the records of extracurricular activities for anyone who examines them to find predictors of post-school success in obtaining employment. Sociability, supposedly developed in clubs, and "acceptiveness," as measured by political officeholding, are not, it appears, selective factors at the employment office.

Part-Time Work While at School

The value of our data on time spent at part-time work while attending school is limited by the fact that records for many members of our experimental group were incomplete. Any interpretation of the results presented in Table 32, which follows, must be conditioned by the fact that the records of 12 per cent

of the employed boys to 38 per cent of the unemployed girls were incomplete. The differences between percentages in Table 32 are significant, but since we do not know what factors influenced the making of complete and incomplete records, and since it is impossible to check at this time, we shall have to use the data in the table carefully.

It is especially unfortunate that the records are not complete enough for reliable results, because the differences between groups appear to confirm a rather common "notion" that a boy or girl who has secured work while at school has the qualities which will enable him to secure employment after his period of school attendance. Comparison of the percentages of unemployed boys (11 per cent) who worked regularly while in school, of employed boys (31 per cent); of "more than half time employed" boys (39 per cent); of "school" boys (25 per cent); and of even the "less than half time" boys (22 per cent) suggests that there is something to the belief that a "worker while at school works after school." The differences between

TABLE 32
WORK FOR WAGES WHILE AT SCHOOL DONE BY SUBJECTS OF EXPERIMENTAL
GROUP CLASSIFIED BY OCCUPATIONAL STATUS

Occupational Group		Per Cent Working Regularly While at School	Per Cent Irregular Work While at School	Per Cent Not Working While at School	Per Cent Incomplete Records
Employed	Boys	31	47	10	12
	Girls	18	25	24	33
Unemployed	Boys	11	47	6	36
	Girls	10	31	21	38
At Home	Girls	8	46	13	33
At School	Boys	25	29	16	30
	Girls	5	30	32	33
Employed more than half time	Boys	39	34	11	16
	Girls	15	23	24	38
Employed less than half time	Boys	22	44	9	25
	Girls	15	25	26	34

employment groups are not so marked in the case of girls, although the unemployed and "at home" girls have the smallest percentages of those who were regularly employed while at school. Examination of the "not working while at school" column of Table 32 gives further evidence to the effect that those who do less work while at school do less after school. Again, however, our conclusions must be tempered by our missing data. We may say that our data point to the effectiveness of work while at school in determining employment status after school completion, but the direction may be (although it does not appear likely) changed in another population.⁵

First-Grade Ratings

If teachers of pupils in the first year of school could give us reliable and valid ratings of the characteristics of their pupils, and if the ratings so obtained were put in the hands of people familiar with diagnostic and remedial work, we should be able to make great strides in guiding the development of pupils, so that they would be able to do the occupational and academic work for which they are best fitted.

The subjects of our investigation were rated by their first-grade teachers, and it is of interest to determine whether or not their ratings are significant for the prediction of post-school success in securing employment. The procedure for evaluating the ratings of our subjects on fifteen characteristics has been described in Chapter II. It was pointed out there that the ratings were transmuted into numerical scores ranging from a score of one for the lowest rating to ten for the highest, and the mean scores of our subjects, classified by occupational status, are presented in Table 33. The extent to which the scores are grouped around a mean score of five emphasizes again

⁵It may be, although we have no direct evidence to indicate it, that some of our subjects continued to hold, after finishing school, the positions which they held while attending school. Many of the positions which our subjects now hold (see Appendix II) might well have been carried on as part-time work while at school. It may be, then, that work done while at school often leads to regular positions after school is completed.

TABLE 33

FIRST-GRADE TEACHERS' RATINGS OF CHARACTERISTICS OF THE EXPERIMENTAL SUBJECTS GROUPED BY EMPLOYMENT STATUS

	Employed		Unemployed		at Home		In School		More Than Half Time		Employed Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Intelligence	51	48	48	51	50	54	51	51	48	50		
Ability to get directions	51	48	52	51	47	53	51	52	47	48		
Concentration	50	51	50	53	47	55	51	53	46	51		
Work study	49	51	49	53	49	56	51	54	45	53		
Play and games	51	50	49	53	48	54	50	50	48	50		
Cooperation	50	52	49	54	51	55	51	50	48	51		
Leadership	50	49	49	52	50	55	51	49	47	50		
Nervous condition	48	49	46	50	48	52	49	50	48	50		
Scholastic standing	50	48	49	51	49	53	50	51	47	51		
Arithmetic ability	50	47	51	51	47	51	52	51	49	50		
Reading ability	47	48	47	53	49	55	49	50	47	49		
Expressive ability	49	48	47	51	48	56	50	50	46	50		
Handwork	49	52	45	52	46	55	49	53	45	51		
Behavior	47	53	48	55	51	55	50	56	46	54		
Home conditions	50	49	50	51	51	55	48	49	49	48		
Means of the means (Weighted)	49	50	49	52	49	54	50	50	46	50		

what has been pointed out previously — the tendency for teachers to prefer the “average” classification. The range of the means extends only from 4.5 to 5.6, a difference of only 1.1 points on fifteen ten-point scales. We have not computed sigmas for all the 165 distributions, because examination of the distributions and means did not indicate that such computations would contribute significantly to a study of employment problems, but the distributions are markedly similar in appearance.

Some of the differences between means are statistically significant, but the social significance for the study of employment of our ratings is questionable. A study of the weighted means of the means indicates that the groups who are still in school are generally superior to all other groups, that the “more than half time employed” are second highest, the “employed” groups third, the “unemployed” fourth, the “at home” group fifth, and the “less than half time employed” groups sixth. On the whole, girls are superior to boys. The low ratings of the group of boys who have been employed less than half time during the past year are significant. The small differences obtained between means secured from such large numbers of ratings assume some value (as in the case of the “less than half time” boys), where the mean rating in every characteristic is below average. Trends of small differences do not, however, argue for significance.

The results obtained from this section of our study present many difficulties of interpretation. It does appear that teachers can pick out with some success the extremes of their pupils in relation to desirable characteristics. Just how significant their ratings would be in predicting vocational success in other than a depression period is difficult to determine. It is altogether likely, too, that since these ratings were made, teachers have learned a great deal more about avoiding “halo” and “hearsay” effects in their ratings, so that a similar set of data would be difficult to duplicate.

Subject Fields Best Liked, of Most Value, and in Which Training Is Now Desired

Since we find no significant differences in achievement among employment groups in past school performance, we must look for differences in their evaluations of what are the most practical and best-liked subject fields and examine their choice of subjects in which further training is desired. In the "subject of most practical value" table (Table 34) we find some interesting (if not especially significant for employment) judgments of students who are looking back on their scholastic careers. The majority of girls of all except the "at home" group think that office practice, shorthand, and typing have been of most practical value. Fifty-four per cent of the "unemployed," 50 per cent of the "more than half time" and 67 per cent of the "less than half time" groups of girls still think the commercial subjects of most value, although they have had little success in securing employment in the commercial fields. In two later tables it is shown that not only do they think the business courses of most practical value, but they state that they enjoyed these subjects most and want more training in them. The need for occupational information is great.

Domestic science for girls is a popular second choice, and 22 per cent of the employed girls think their courses in that field to be of most practical value, while only 10 per cent of the unemployed groups consider it of high practical value. Twenty-seven per cent of the "at home" group (composed largely of married women) think that domestic science was of most practical value to them. English holds third place consistently after commercial work and domestic science.

Boys have no subject for which they vote so heavily as the girls have voted for the commercial courses. English and mathematics are considered by the "employed" and "at school" boys to possess most practical value; the "unemployed" and the "less than half time employed" choose manual training, while the "more than half time group" vote for mathematics. In

TABLE 34

SCHOOL SUBJECT FIELDS DESIGNATED AS OF MOST PRACTICAL VALUE BY THE SUBJECTS OF THE EXPERIMENT CLASSIFIED BY EMPLOYMENT STATUS

School Subject Field	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent at School		More Than Half Time		Per Cent Employed Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1 English	26	22	16	15	34		23	22	12	18	17	
2 History	2		3	1			3		3		3	7
3 Languages			1				4	4	2		2	1
4 Mathematics	26	7	10	2	8		21	2	30	7	16	
5 Science	5		7	2			16	8	8	2	2	7
6 Manual training	3		19				3		12		20	
7 Domestic science	1	22	1	10	27			10	3	5	1	1
8 Art and commercial art	2	1	6	2			4	3		2	4	4
9 Office practice, shorthand, typing	6	41	6	54	27		4	40	11	50	10	67
10 Music	4	1	2	2	4		4	2	3	7	4	2
11 Trade school courses	13	1	14	1			4	2	12	2	15	5
12 Miscellaneous (Filled in by subjects)	12	5	15	11			14	7	4	7	6	6

TABLE 35

SUBJECT FIELDS BEST LIKED BY MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

School Subject Field	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent in School		More Than Half Time		Per Cent Employed Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1 English	8	15	8	13	4	4	11	8	4	7	6	7
2. History	15	5	10	3	8	8	19	8	15	7	16	9
3 Languages	4	4	4	5			4	13	4	10	1	6
4 Mathematics	19	4	10	4	4		15	4	26	2	18	8
5 Science	11		12				19	10	6	2	9	4
6. Manual training	7	1	21				5		8		14	
7 Domestic science		3		10	20			12	3	5	8	2
8 Art and commercial art	5	7	9	4	8		5	3	3	2		4
9 Office practice, shorthand, typing												
10. Music	7	51	2	46	32			31	6	44	6	53
11. Trade school courses	6	5	2	6	20		4	2	6	14	5	2
12 Miscellaneous (Filled in by subjects)	9	5	7				7	4	11		10	2
	9	5	15	9	4		11	5	8	7	7	3

TABLE 35A

STUDIES CONSIDERED TO BE OF MOST PRACTICAL VALUE AND SUBJECTS BEST LIKED BY THE MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS—THIS TABLE PRESENTS IN DETAIL THE ITEMS LISTED UNDER GROUPS 12 OF TABLES 34 AND 35

(a) Of Most Practical Value

Employed	Unemployed	At School	More Than Half Time	Employed Less Than Half Time
Accounting	(2) Accounting	(2) Accounting	(2) Advertising	Clothier
Athletics	Boat builder	Beautician	Accounting	Construction
Banker	Business machines	Coaching	Chemistry	Diesel engineering
Clothier	Dancing	Chemistry	Clerical	Dressmaker
Cabinet making	Diesel engines	Commercial study	Dancing	Mechanical drawing
Dressmaker	Dressmaker	Diesel engines	Dressmaker	Nurse
Engineering	Laborer	Economics	Electrician	(2) Plumber
Forestry	Machinist	Harddresser	Forestry	
Machinist	Mechanical art	Law	(2) Governance	
Radio	Printing	(2) Medical	Guidance	
Sewing	Physical education	(2) Nurse	Harddresser	
	Salesgirl	Painter	Nurse	
	Sewing	Printing	Sewing	
		Physical training		
		Salesgirl		
		Woodcraft		
		(b) Best Liked		
Accounting	Accountant	(2) Accounting	Dancing	Chauffeur
Auto mechanic	Business machines	Aircraft (Diesel)	Dressmaker	(2) Clothier
Banker	Cabinet making	Harddresser	Electricians	(2) Constructing
Dramatics	Dancing	(2) Hotel manager	Forestry	(2) Drawing
Drawing	Dressmaker	Law	Harddresser	Dressmaking
Economics	Machinist helper	Mechanical drawing (2)	Nurse	Mechanical art
Engineering	Mechanical art	Reporter		Plumber
Forestry	Physical education	Sewing		
Physical education	Printing	Surgery		
Sewing		Woodcraft		
Writing				

TABLE 36

SUBJECT FIELDS IN WHICH TRAINING IS NOW DESIRED BY MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Subject Field	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent at School		More Than Half Time		Per Cent Employed Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1 English	8	14	8	4	4	12	10	6	5	5	7	3
2 History	2	1	1	1	1	4	7	3	4		5	3
3 Languages	3	4	3	4			6	15	8	7	4	8
4 Mathematics	9	4	8	2		7	10	1	13	2	12	3
5 Science	6	3	16				20	8	8	7	6	2
6 Manual training	3		12				2		8		8	1
7 Domestic science	1	4		4		23		8	1	2		3
8 Art and commercial art	5	10	7	6		4	6	4	3	7	5	8
9 Office practice, shorthand, typing	9	42	8	49		23	5	29	9	42	11	50
10 Music	11	5	1	6		12	4	8	9	7	4	10
11 Trade school courses	12	1	12	4			4	5	10		23	3
12 Miscellaneous (filled in by subjects)	31	12	24	20		15	27	13	22	21	15	6

TABLE 37

FIELDS IN WHICH OUR SUBJECTS WISH FURTHER TRAINING—THIS TABLE PRESENTS IN DETAIL THE ITEMS LISTED UNDER GROUP 12 OF TABLE 36

Employed	Unemployed	At School	More Than Half Time	Employed Less Than Half Time
Accountant	Accountant	Accountant	Aviation	Accountant
Agriculture	Aviation	Aviation	Electrician	Aviation
Business course	Beautician	Buyer	Mining	Beautician
Cartoonist	Business machines	Chemistry	Engineer	Bookkeeper
Civil service	Dancer	Civil engineer	Nurse	Construction
Dressmaker	Journalism	Dressmaker	Physics	Diesel engines
Drawing	Librarian	Dietician	Radio	Law
Diesel engines	Machinist helper	Dental hygiene	Refrigeration	Doctor
Engineer	Mechanical engineer	Engineer	Social service	Painting
Hairdresser	Mechanical art	Electrician		Radio
Medical	Motion picture	Economics		Salesman
Mechanic	Nurse	G-man		Surgery
Optometry	Printer	Law		
Radio	Radio	Medicine		
Retail selling	Salesgirl	Medical science		
Salesman	Secretary	Ministry		
Singer	Sheetmetal	Nurse		
	Telephone worker	Painting		
		Physiology		
		Radio		
		Sheetmetal		
		Teacher		
		Woodcraft		

choosing the subjects which they consider to be of most practical value our subjects have apparently not considered the value of their training in securing employment, but have based their decisions on factors not related to their present employment status.

Our subjects have differentiated rather clearly subjects of most practical value and subjects best liked. Although English stood high in the "of most practical value" table, it does not do so in the "best liked" table. Mathematics keeps its high place for boys, and history moves up into the place held by English in the practical value table. Girls thought commercial courses to be of most value and also liked them most. Again, however, the results in our table are interesting but of no significance in differentiating employed and unemployed

We have presented students' choices of the subject fields which they liked best and which they thought were of most practical value. We have asked our subjects, also, to indicate the subject fields or vocations for which they would like further training. The results are presented in Table 36 and the supplementary Table 37.

By reference to Table 36 it will be seen that our subjects used the opportunity presented in item 12 to write in the educational and vocational subject fields in which training is desired. The direction of the swing toward the more strictly vocational fields and away from the academic fields is indicated in supplementary Table 37.

Of those who wish further training in the regular high school subjects very few wish to study further in strictly academic subjects listed in the first five items of Table 35. Of the four groups of boys classified by employment status, approximately one third want further training in the subject fields of English, history, languages, mathematics, and science. Significantly less than one third of the girls want to continue in the strictly academic subjects. The tendency for girls other than the "at home" and "at school" groups to select further training in the commercial fields indicates again their preference for steno-

Subject Best Liked

	Subject Marked Most Valuable											
	1	2	3	4	5	6	7	8	9	10	11	12
12	7			7	4	1	1	2	3	1	1	51
11	2			7		1				1	35	2
10	10			7			1	2	9	20	1	2
9	13			5	1		5	1	19	8	3	3
8	7			3				20	10		1	2
7	8			1			25		3		1	1
6	2		1	8	2	28					6	1
5	13			10	32	4	2	1	4		7	6
4	21		3	53	6	2	2	1	9		1	3
3	15	2	6	4	3		3		9	2	2	3
2	34	12	1	17	4	3	5	1	19	2	3	8
1	53	1	3	1	2		6		9	3	2	5

N = 960

Numbers outside the scattergrams refer to the following subjects

- 1 English
- 2 History
- 3 Languages
- 4 Mathematics
- 5 Science
- 6 Manual training
- 7 Domestic science
- 8 Art and commercial art
- 9 Office practice, shorthand, type-writing
- 10 Music
- 11 Trade school courses
- 12 Vocational training

Training Desired

	Subject Marked Best Liked											
	1	2	3	4	5	6	7	8	9	10	11	12
12	10	17	7	17	17	7	4	6	22	3	11	67
11	3	8	1	8	4	9	2		2	2	31	3
10	5	5	2	2	2		2	1	13	29	3	2
9	12	16	12	10	3	2	2	3	15	3	11	2
8	2	3	5	3	2	1	10	34	9	1		
7	2	2	1	1	2		19	1	3	1		
6	1	1		1		23			1		1	1
5	2	13	2	9	43	3			1		2	1
4	2	7	2	43	4	4		2	3	1		
3	8	11	18	6	4		2	1	11	1		
2	2	24	1	2	1				2			
1	33	6	1	9	2	2	1	1	15	3		

N = 998

		Subject Marked as Most Valuable											
		1	2	3	4	5	6	7	8	9	10	11	12
Training Now Desired	12	29	1		27	12	4	7	1	27	2	10	56
	11	5	2	1	9		6	2		3	1	36	2
	10	9	1		8	1		3	1	17	21	3	4
	9	32	1	1	16	1	2	10		15	1	4	6
	8	5			1	1		2	26	18	—	1	2
	7	9						16	1	5	—		1
	6	2		1	2	2	17			1	—	3	
	5	17	1	1	11	29	3			4	1	2	3
	4	6	1	1	39	1	3	2		5	—	2	1
	3	15	1	8	2	3	1	4		20	—	2	3
	2	9	5		4	3	2	2		3	—	—	2
	1	42	1		4		2	2		17	1	—	

N = 946

graphic and office work. It may be that these people have realized the inadequacy of their training and have learned that not less but more *well-trained* stenographic and office workers are needed.

Although there is a marked tendency for our subjects to seek further training in courses which they liked best and found to be of most practical value in high school (and the relationship between choices of best-liked subjects and most practical value subjects is close, as shown on the scattergrams shown above), there is a tendency to turn for future training away from the academic to the vocational fields. These findings are worth consideration by those who are setting up programs for further education of unemployed youth.

Attitude toward Education

Since the study of the school performances of our subjects revealed no outstanding differences between employment status groups, we looked at the response to our school attitude scales

TABLE 38

ATTITUDE TOWARD EDUCATION EXPRESSED BY MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Attitude toward Education	Per Cent Employed		Per Cent Unemployed		Per Cent in School		More Than Half Time		Per Cent Employed		Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
	29.6	35.8	38.9	38.6	33.4	40.2	29.8	45.9	34.5	34.0	34.5	34.0
1. Very favorable	57.0	55.4	50.0	53.6	56.6	57.4	58.3	45.9	57.6	54.6	57.6	54.6
2. Favorable	11.3	7.6	10.0	5.3	10.0	2.4	10.7	8.2	7.3	9.2	7.3	9.2
3. Undecided	1.4	1.2	1.1	1.5		0.1	1.2		0.6	2.2	0.6	2.2
4. Unfavorable												
5. Very unfavorable	0.7											

TABLE 39

REASONS GIVEN FOR SCHOOL LEAVING BY SUBJECTS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Reasons for Leaving School	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent at School		More Than Half Time		Per Cent Employed		Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
	45.6	55.6	39.1	49.4	34.4	34.4	71.2	63.5	52.8	54.0	26.9	60.3	26.9	60.3
Graduated	41.7	28.3	44.6	36.9	28.0	28.0	18.1	28.2	37.8	36.5	46.4	25.0	46.4	25.0
Preferred work to school			1.1	2.2	9.4					1.6	6.0	4.2	6.0	4.2
Needed at home	0.7	1.0	2.2								3.0	0.7	3.0	0.7
Expelled	1.3	2.0			6.3	6.3	1.0	0.6		1.6	6.0	0.7	6.0	0.7
Ill health														
Married					0.7	6.3								
Miscellaneous		1.0	3.2	3.6	6.3		2.9	2.4	3.5	1.6	9.7	4.2	9.7	4.2
Moved from city														
(Reasons for school leaving unknown)	10.7	9.1	9.8	7.2	9.3		6.8	5.3	5.9	4.7	2.0	4.9	2.0	4.9

to see if we could find any differences between groups in their feelings toward education. The complete attitude scale reported in Chapter III gave the subjects the opportunity to express their attitudes by responding to nine questions, the scores from which have been summarized to give a single summary score indicating whether the subject's attitude was very favorable, favorable, undecided, unfavorable, or very unfavorable toward education. The response of our subjects presented in Table 38 reveals a very favorable attitude toward education by all groups, since more than 86 per cent of all groups express a favorable attitude toward education, while not more than 2.2 per cent of any group are unfavorable.

The per cent of "employed" boys (29.6) and of "more than half time employed" boys (29.8 per cent) are *very favorable* in contrast to the 34.9 per cent of "less than half time employed," the 34 per cent of boys "in school," and the 38.9 per cent of the "unemployed" boys. The indication is that the boys who have secured positions are less enthusiastic about education than those who have not been so fortunate. In the *favorable* row of the table, however, the differences are so evened out that the differences between any of the employment groups are insignificant. Fewer members of the "school" group are undecided about the value of education, and more of them are favorable toward it. The slight differences in the unfavorable column are not significant.

We can report no significant differences in attitude toward education between employment groups, but the figures reveal that our subjects as a whole are definitely favorable toward education. Much as our system of education has been maligned, and as unsatisfactory as it has been in fitting these young people for their vocational careers, our subjects look back upon it favorably.

School Leaving

It was pointed out in Chapter II that our results with respect to amount of time spent in school and the reasons for leaving must be interpreted in the light of economic condi-

tions at the time our subjects were old enough to secure working permits. At that time (and since) the opportunities for employment were more limited than is customary, so that many of our subjects must have remained in school because they could not secure employment.

With the above statement in mind we may examine Table 39, in which are reported the reasons given for school leaving by our subjects who have been classified by employment status. A significantly smaller percentage of the "less than half time" and "unemployed" boys than any other groups of boys have remained to graduate. Similar smaller percentages are not found among the groups of girls. It is worth noting that 45 per cent of our "unemployed" boys, 38 per cent of our "more than half time" and 46 per cent of our "less than half time" boys left school to go to work but are now without regular employment. It is also worth noting that 18 per cent of the boys and 28 per cent of the girls in the "school" group left school to go to work but have since returned to school or college.

Unfortunately the records for 2 to 11 per cent of our groups were not obtained so that we cannot state accurately the significance of all the differences obtained from Table 39. The miscellaneous group includes from 1 to 10 per cent of our subjects in the various unemployment classifications, and the "moved from the city" classification includes a large number of subjects whose reasons for leaving school were not accurately determined. For these reasons it is impossible to state the extent to which we can depend on the finding that larger percentages of our "unemployed" and "less than half time employed" boys were expelled from school. Many may have escaped detection and may have been placed in the "moved from the city" classification. (Expulsion of a child from school may actually have been the cause for moving from the city.) The "less than half time employed" group (both boys and girls) includes a larger proportion than any other group of subjects who left school because of ill health.

We can state with considerable assurance that boys who remain to graduate have a better chance of securing jobs than those who do not, but the same statement does not apply to girls. Leaving school early because a boy prefers work to school does not mean that a boy will be successful in keeping his job when there are fewer than usual opportunities for employment. The findings outlined above may be explained partly by the arbitrary procedure of employers who insist on high-school graduation regardless of its nature and value for employment applicants, and by the fact that when a boy leaves school to go to work he is required (by lack of training) to take a job of uncertain tenure.

Intelligence Test Scores

In Chapter II we have listed the intelligence tests given to our subjects at ages eight, twelve, and sixteen, have described briefly the procedure used in equating the intelligence quotients, and have presented the means and sigmas of the intelligence quotients of our groups at ages eight, twelve, and sixteen. In Table 40, which follows, we have listed the mean mental ages obtained from the I Q 's of our subjects who have been grouped by employment status.

Before the reader draws any conclusions from Table 40 it will be necessary to consider the reliability of the tests. The reliabilities of all the tests included here lie between .70 and .90, so that the probable errors are not less than four I Q. points and four to five months of mental age. It will be necessary, then, to interpret the differences obtained here with great care.

It is obvious immediately that the school group is significantly further advanced in mental development than any of the other groups. The unemployed boys have lower mental ages than the employed group at all ages, while unemployed girls are less intelligent than employed girls at ages twelve and sixteen. At all three age levels (eight, twelve, and sixteen) the "school" group is consistently and significantly superior to all other

TABLE 40

MEANS AND SIGMAS OF MENTAL AGES AT CHRONOLOGICAL AGES 8, 12, AND 16, OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Employment Groups		Means and Sigmas of Mental Ages to Nearest Month, at Chronological Ages					
		8-0		12-0		16-0	
		M	σ	M	σ	M	σ
Employed	Boys	100	17	144	17	187	15
	Girls	97	16	143	17	189	15
Unemployed	Boys	96	16	137	16	185	14
	Girls	98	17	137	15	183	14
At home	Girls	95	17	136	21	185	11
At school	Boys	106	16	153	17	196	16
	Girls	104	17	149	16	198	16
Employed more than half time	Boys	98	16	141	16	185	15
	Girls	100	17	143	20	192	17
Employed less than half time	Boys	94	17	136	16	179	17
	Girls	99	17	140	17	181	13

groups in general intelligence-test performance. The greatest differences in the other groups at all ages are those between the "employed" and "less than half time groups," and these greatest differences are just barely significant. The other differences are not. It must be emphasized here that the figures reported are averages and that the differences between all the averages are so small that if one were to select any subject at random from any of the groups, nothing could be said about his mental ability other than that the chances are slightly greater that he would be less intelligent if he were selected from the "less than half time" group or "unemployed," than if he were selected from the "employed" or "at school" groups.

It is extremely doubtful that any of our figures, whether statistically significant or not, have been of significance in the selection of employed subjects, because very few employers use mental tests in the employment procedures, and without tests the employer's selection of applicants upon the basis of a guess as to their mental ability is likely to be highly erratic. We must then conclude that (except in the case of our "less than half time" boys) mental ability as measured by standard mental tests is not an important factor in the securing of employment of the kind that our subjects seek.

Anthropometric Measurements

We have included anthropometric measurements in our study because they were available and because we had the opportunity to get them together with the clerical assistance provided. It does not appear likely that anthropometric differences would be a significant factor in the selection among applicants for employment, except in rare cases where positions required large stature or when an individual was so abnormal in anthropometric development (unusually short or fat) that such development hampered the applicant in the performance of his duties. Thorndike (1934) has reported, however, that employers do pay a premium for size alone when selecting clerical workers

We have presented in Table 41 the mean standing heights

TABLE 41

STANDING HEIGHT IN CENTIMETERS AND WEIGHT IN KILOGRAMS AT AGES 8, 12, AND 16, OF THE SUBJECTS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Age	Mean Height Employed		Mean Height Unemployed		Mean Height at Home		Mean Height at School		More Than Half Time		Mean Height Employed Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Age 8-0	122.6	121.0	122.0	120.6	120.2	120.2	123.4	122.6	122.6	122.2	122.2	121.4
Age 12-0	142.6	144.5	142.6	144.0	142.6	142.6	144.5	146.0	143.0	144.5	143.0	144.0
Age 16-0	167.0	157.5	167.0	157.0	158.0	158.0	168.5	158.5	166.5	157.6	167.0	158.0
	Weight		Weight		Weight		Weight		Weight		Weight	
Age 8-0	23.7	23.8	23.8	23.6	23.6	23.6	24.2	23.7	23.9	23.8	23.9	23.7
Age 12-0	35.7	39.4	36.9	39.4	35.1	35.1	37.5	35.8	35.1	35.8	36.9	35.8
Age 16-0	55.9	53.5	57.1	53.5	51.0	51.0	59.6	53.5	56.5	53.5	58.4	52.6

and weights at ages eight, twelve, and sixteen of our subjects classified by employment status. The means of the standing heights of our groups of boys are so similar that the greatest range of differences (except in the "school" group) is 0.6 of a centimeter, a difference that is insignificant. Among the girls' groups there is wider variation, but since the differences in stature are less than one inch (and these differences may be partly due to the ethnic group differences), they are neither statistically nor socially (for employment) significant. The "school" group of boys are taller at all ages.

The situation in weight is similar to that found in the case of stature. Again, no differences are found that could be considered important in the determination of which of our subjects are likely to be employed irregularly, employed regularly, or unemployed.

The physical anthropologist may be interested in the presentation of averages for the same subjects over an eight-year period. The individual interested in employment problems will find nothing of significance in the anthropometric measurements (height and weight) of employed and unemployed groups.

Skeletal Age

We have included, in addition to the anthropometric measures, a measure of development which would not appear to be an important factor in securing employment unless development was sufficiently abnormal to interfere with the performance of work. Our measures of skeletal ages are measures of maturity and immaturity, but the word immaturity as used here does not necessarily carry the popular connotation of that word — childish behavior. When we speak of maturity here, we mean skeletal maturation, as determined by Todd's (1931) method of assessing roentgenographs of the wrist bones.

We have noted in Chapter II that the probable error of an assessment is approximately three months, and hence we cannot consider as significant small differences between groups of individuals. The greatest difference between our groups (Table

42) of boys at age eight is one month, at age twelve four months, and at age sixteen six months. No one of these differences, in view of our present knowledge of skeletal development, is of significance. The six months' difference noted is between "unemployed" and "at school" groups.

TABLE 42

MEAN SKELETAL AGES AT CHRONOLOGICAL AGES 8, 12, AND 16, OF MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Employment Group		Skeletal Ages at Chronological Ages		
		8-0	12-0	16-0
Employed	Boys	7-10	11-9	16-0
	Girls	7-8	12-0	15-11
Unemployed	Boys	7-11	11-11	15-8
	Girls	7-11	12-1	15-10
At home	Girls	7-6	11-2	15-6
At school	Boys	7-11	11-10	16-2
	Girls	7-11	12-0	15-10
More than half	Boys	7-11	11-7	15-10
	Girls	7-7	12-2	16-3
Less than half	Boys	7-11	11-8	15-9
	Girls	7-7	12-0	15-9

If we exclude the "at home" groups of girls, which are too small to make comparisons reliable, we find the greatest differences in mean skeletal ages of our groups of girls at ages eight, twelve, and sixteen to be only four, two, and six months, respectively.

The Attitudes Scales

In previous sections we have presented in some detail the items of three attitude scales. The subjects covered in these scales include attitudes toward employment, attitudes toward unemployment, and attitudes toward education. In the following section we shall discuss the response to the attitude scales concerning existing conditions. From these results we may be

able to secure more satisfactory evidence than has been hitherto obtained on a subject about which much has been written, but about which little of significance has been discovered — the effect of a period of unemployment upon attitudes toward existing conditions.

The early certainty characterizing studies of attitudes during the period in which psychological measurement was being developed appears to have been dissipated by later findings. Thus we have Kelley and Krey (1934) giving up their attempt to use attitude scales in the measurement of social attitudes of junior high school children. Five of their reasons which led them to give up their attempt should be noted here. They are:

1. Pupils did not understand the terms and concepts. It was impossible to know from their checked response what they had really understood by the proposition.
2. Attitudes vary in depth, stability, and permanence, and the scale responses give no clue as to these differences.
3. Most people are reluctant to tell what they think about important issues except under rare conditions of exceptional confidence. "Only the most rabid partisans are willing to divulge their attitudes freely, and for such no test is necessary." Children in school are apt to protect themselves by answering what they think is expected; adults by refusing to answer the questionnaires.
4. There is sometimes a tendency toward compensation. The person lax in conduct may try, consciously or unconsciously, to make up for this by extreme verbal condemnation of such behavior.
5. Many of the answers were superficial snap-judgments, given rather to oblige the questioner than because of any independent attitude on the part of the subject tested

Notwithstanding the statements made by these experts, we have attempted again to measure attitudes, because under the conditions of this study we were able to avoid some of the difficulties which Kelley and Krey have outlined. Since our subjects were not required to sign their names to the questionnaires, and since we had no authority over our subjects, we can assume that they expressed themselves as freely as they

desired. This assumption is made more tenable by examination of the letters written by our subjects when allowed freedom to express their opinions. Apparently they felt that they did not need to protect themselves. Although there may have been some efforts to make statements which would please or influence the senders of the questionnaires, we have not been able to find any evidence to this effect. Extremes of attitudes were marked frequently

Since we have been unable to avoid all the difficulties which Kelley and Krey have pointed out, we have tried to use our results as descriptions; and since scales have been used in which the subjects had no marked incentive to conceal their true attitudes, they seem to offer adequate possibility for describing the attitudes of our subjects

The majority of the members of all but the "at home" group believe that the opportunity to get ahead is *not* so good as it was ten years ago, and we find only a very small proportion (17 per cent of the "less than half time boys" to 39 per cent of the "at home" girls) of our subjects who *strongly agree* or *agree* that the opportunity to get ahead is as good as it was in 1925. Now we do not know whether our subjects have thought the question through for themselves or whether they have succumbed to propaganda presented by political groups, but if these youths really believe what they have indicated they believe (and under the conditions of the investigation we have no reason to believe that they do not), the situation is not a happy one.

But our youth still believe that the way to progress is to be found in hard work, if we are to rely on the results presented in the last section of Table 43. In all our groups from 61 to 82 per cent of our subjects agree or strongly agree that hard work is the way to an increase in salary and promotion. Our subjects do, however, think that the opportunity to get ahead is not so good as it was ten years ago, and they do think that the depression has retarded the progress of youth (Section 3 of Table 43

ATTITUDE TOWARD FUTURE POSSIBILITIES EXPRESSED BY MEMBERS OF THE EXPERIMENTAL GROUP CLASSIFIED BY EMPLOYMENT STATUS

Opportunity to Get Ahead as Good Now as 10 Years Ago	Per Cent Employed		Per Cent Unemployed		Per Cent at Home		Per Cent at School		More Than Half Time		Less Than Half Time	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
1 Strongly agree	100	75	71	89	17.8	75	8.4	50	71	81	93	
2 Agree	143	27.5	119	121	21.4	209	19.3	240	23.3	87	18.3	
3 Undecided	200	150	202	105	21.4	209	12.6	126	161	119	11.4	
4 Disagree	350	350	298	298	28.6	33.8	380	34.2	30.3	38.8	30.5	
5 Strongly disagree . . .	207	150	309	387	10.8	109	21.7	24.2	23.2	32.5	30.5	
Depression Has Retarded Progress of Youth												
1 Strongly disagree . . .	28	37	23	2.4	3.4	5.4	6.2	6.2	3.5	3.2	2.3	
2 Disagree	137	87	82	5.6	17.2	15.2	13.6	13.8	16.1	7.0	7.6	
3 Undecided	11.4	87	106	6.4	10.4	16.2	12.3	12.5	12.5	11.4	9.9	
4 Agree	51.4	62.5	38.8	37.6	37.9	45.6	39.5	47.5	50.0	43.0	42.0	
5 Strongly agree	207	162	401	480	31.1	17.6	28.4	20.0	17.9	35.4	38.2	
Long Time before Things Get Better												
1 Strongly disagree . . .	3.5	2.6	9.2	0.8	7.2	4.4	1.8	3.8	1.8	1.9	0.7	
2 Disagree	210	14.8	42.5	6.4	46.4	27.6	24.5	22.8	17.5	12.7	4.5	
3 Undecided	46.8	34.5	36.8	45.2	23.0	46.6	44.9	51.9	52.6	50.0	52.3	
4 Agree	21.7	37.0	11.5	28.6	21.4	14.6	19.8	16.4	15.8	25.3	31.1	
5 Strongly agree	70	11.1	19.0	19.0	6.8	9.0	12.3	5.1	12.3	10.1	11.4	
Hard Work Will be Rewarded with an Increase in Salary and Promotion												
1 Strongly agree	21.8	21.7	28.6	36.6	29.6	31.8	27.9	25.0	21.4	30.2	25.0	
2 Agree	52.1	51.8	35.7	44.7	40.7	46.3	44.2	57.5	39.2	40.2	36.7	
3 Undecided	16.2	14.5	26.2	15.4	22.2	13.7	18.2	11.2	23.2	10.9	25.8	
4 Disagree	7.8	9.6	7.1	3.3	7.5	6.3	8.5	5.0	12.5	8.2	8.6	
5 Strongly disagree	2.1	2.4	2.4	2.4	1.9	1.9	1.2	1.3	3.7	2.5	3.9	

The analyses by employment groups of the responses to our questions reveal that in certain attitudes the employment status of the subjects makes little difference in response, while in others there are significant differences. The "at home" girls lead all others (39 per cent) in the belief that the opportunity to get ahead is as good as it was ten years ago. The employed girls are nearly as optimistic (21 per cent). The "more than half time employed" boys are most optimistic about the future (28 per cent), with the "school" boys almost as much so. The "employed" boys, the "unemployed" boys and the "less than half time employed" are listed in descending order of optimism. The range of variation for the boys is, however, only 11 per cent, which hardly allows for significant differences between groups. Employment status is not, then, an important factor for youth in the response to the question of present opportunities for advancement in comparison with the previous period. All are almost equally sure that the opportunities at the present time are not so good as they were before the economic depression.

The percentages of our subjects in the eleven employment groups who agree and strongly agree that the depression has retarded the progress of youth range from 63 per cent of the boys in school to 79 per cent of the unemployed boys, and from 68 per cent of the girls in school to 85 per cent of the unemployed girls, with the percentages of other groups lying between these extremes.

It has been noted previously that almost half of our subjects were undecided whether or not it would take a long time for things to get better. Notable exceptions are the "at home" girls, who are more optimistic than any other group. The employed girls and unemployed boys are more decided in their opinions about the length of time required for improvement. The percentages among our groups who disagree or strongly disagree that it will be a long time before things get better range from 5 per cent of the "less than half time" girls to 52 per cent of unemployed boys. The third section of Table 43 presents some striking sex differences.

We have noted in this section that our subjects in all employment groups have faith in the efficacy of hard work in improving their fortunes. The lowest percentage for faith in hard work is among the girls who are employed more than half time (61 per cent), while the boys who are employed more than half time (82 per cent) have the most faith in hard work. Again we note striking sex differences such as those appearing in the third section of the table. Employed boys have slightly more faith in hard work than unemployed boys, but unemployed girls have slightly more faith than employed girls.

Attitudes toward Government Policies

If the young people of today, employed and unemployed alike, have developed during the economic depression unfavorable attitudes toward their environment, we could expect that such attitudes would be revealed in the responses to questions concerning their views of the policies of their government. We have included in our questionnaire five items dealing with the social security legislation of the present federal government:

Below each of the following statements are five choices. Underline the word underneath each statement that best expresses your opinion.

1. The government should provide jobs for all young people who are unable to find work.
Strongly agree Agree Undecided Disagree Strongly disagree
2. The CCC camp is a good thing, and more people should be allowed to enroll.
Strongly agree Agree Undecided Disagree Strongly disagree
3. Young people would be better off and there would be more jobs if the government reduced taxes and did not try to regulate business.
Strongly agree Agree Undecided Disagree Strongly disagree
4. Unemployment insurance should be provided for everyone.
Strongly agree Agree Undecided Disagree Strongly disagree

5. The government should make individuals help provide pensions for old people.⁶

Strongly agree Agree Undecided Disagree Strongly disagree

The response to these questions is recorded in tabular form below. Under each response we have indicated the percentages of our total group who chose it.

1. The government should provide jobs, etc.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
23.8	35.6	22.5	15.0	3.1

Favorable total 59.4

Unfavorable total 18.1

2. The CCC is a good thing, etc.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
29.9	46.5	16.1	5.6	2.0

Favorable total 76.3

Unfavorable total 7.6

3. The government should regulate business, etc.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
6.6	17.2	38.9	21.0	16.3

Favorable total 23.8

Unfavorable total 37.3

4. Unemployment insurance should be provided, etc.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
17.5	39.7	25.4	14.8	2.6

Favorable total 57.2

Unfavorable total 17.4

5. Old age pensions should be provided, etc.

Strongly agree	Agree	Undecided	Disagree	Strongly disagree
11.4	31.3	29.2	19.8	8.3

Favorable total 42.7

Unfavorable total 28.1

After summarizing the information presented above, we can state that the majority of this group of young people are decidedly "for" government employment, the CCC, and unemployment insurance. Even if all the undecided people were to cast their votes against these policies (which is not likely), there would still be a majority "for" them. More young people agree than disagree that there should be old age pensions, although the large percentage who are undecided could, by voting unanimously, gain a slight majority. If only 8 per cent of those

⁶Questions 3 and 5 have been reversed for presentation here. In the questionnaire they were stated in negative form.

who are undecided were to swing to the favorable column, a majority for old age pensions would be obtained.

The only policy which these people dissent from is the government regulation of business. Only 23.8 per cent are in favor of it, while 37.3 per cent are against. Again, however, the large group in the undecided column would be able to settle the issue. A decided swing from the favorable column would be needed to secure a favorable majority.

When results which indicate that a group is decidedly "for" certain policies are obtained, one begins immediately to seek information concerning the quantitative and qualitative selection of the subjects from whom the results were obtained.⁷ The subjects of this investigation were selected for no other reason than that they were in the first grade in the public school systems of two cities in New England during the year 1922. No thought was given at that time to the political affiliations of the members of the communities. The willingness of the cities to have educational experimentation carried out in their schools and the desire of the director of the experiment to secure a random sampling of first-grade children were the only factors of selection. If any other factor of selection appears, it is the accident of geographic location, and the writers are quite willing for readers to interpret the results as representative of the opinions of the youth of Massachusetts only, if they so insist. It is worth noting again that the cities in which the subjects of our experiment resided were slightly above the average socio-economic level of the cities of the United States as a whole.

Since 88 per cent of the subjects to whom the questionnaire was mailed replied to it, and since the population was large to begin with (1,541), the quantitative sampling is adequate. In responding to the questionnaire the students were not required to make their identity known, so that the response may be considered as similar to the response to a secret ballot, except of

⁷ Statisticians may be disturbed at the lack of a re-testing coefficient. The results are probably as reliable, however, as election results, where only one opportunity to record a vote is given.

course that a ballot does not allow an "undecided" response.

But now that we know that the sampling has been adequate with respect to quality and quantity, and we know the results, we must ask what they mean and what the implications are. We might interpret the vote for the CCC, government jobs, and unemployment insurance — even the vote that the government should keep its hands off business and reduce taxes — as an indication that these people were lazy and did not want to work, and again, in the case of government jobs and CCC, that the vote was favorable because of the selfish desire to get jobs for themselves. These interpretations appear to be validated in part by the finding that the majority of the school and college group were undecided about them (the schools have done their job of developing the professorial "yes and no"), but the interpretation does not seem so valid when we note that the majority of the employed subjects as well as of the unemployed have a favorable attitude toward security legislation.

CHAPTER V

SUMMARY OF RESULTS AND CONCLUSIONS

Throughout the whole of the previous chapter one short sentence appears after a great majority of the studies of the differences between the characteristics of employed youth and those who had failed to secure regular employment. That short sentence, "The differences are not statistically significant," characterizes most of our findings. There is a *suggestion* in almost every section that the unemployed and irregularly employed are inferior to the employed youth in the characteristics studied, but the differences between the groups do not meet our criterion of statistical significance, and the failure to meet that criterion means, of course, that the small differences might vanish or even be reversed if the investigation were repeated with a new but similar population.

We can state with assurance that there are no real differences between the employed, irregularly employed, and unemployed subjects of our investigation in the following characteristics:

- (1) Chronological age.
- (2) City of residence.
- (3) Occupational training, as reported by our subjects. We have not, however, measures of how well they were trained. We have only records of the occupational training which our subjects *think* they possess.
- (4) Number of years of high school training
- (5) Mean absences from school.
- (6) Mean tardiness while in attendance at school.
- (7) Mean school marks
- (8) Mean test performance in reading and arithmetic at ages eight and twelve.
- (9) Mean intelligence test score at ages eight, twelve, sixteen — except in the case of a small group of boys employed less than half time.
- (10) Mean points earned in extracurricular activities
- (11) Mean first-grade teachers' ratings on fifteen personality characteristics. The differences here are suggestive but not conclusive.
- (12) Subject fields best liked while at school.
- (13) Subject fields thought most valuable while at school.
- (14) Subject fields in which further training is desired.
- (15) Attitude toward education.
- (16) Skeletal development at ages eight, twelve, and sixteen.
- (17) Anthropometric measurements (height and weight) at ages eight, twelve, and sixteen.

We have found significant differences between the employed and unemployed subjects of our investigation in the following characteristics:

- (1) Ethnic origin — There are a significantly greater number of Italian than North European youth without regular employment while a significantly greater number of North European extraction are attending school. The whole problem of ethnic group differences is so involved that this finding must be considered with great

- care. There is a great deal of overlapping between ethnic groups
- (2) Methods of securing employment — The regularly employed people use the public employment agency more frequently than any other group.
 - (3) Work for remuneration while at school — A considerably greater number of employed youth than irregularly employed and unemployed worked for wages while attending school. (This finding is not conclusive, due to the fact that there were no data available on this point for a large number of cases.)
 - (4) Attendance at educational institutions beyond the high school level — The regularly employed youth have slightly more training than the irregularly employed and unemployed in special training schools at the post-high-school level

Incidental findings that have been obtained in the study may be listed as follows:

- (1) Choice of occupation — Students who have received no regular guidance do not choose occupations with a proper knowledge of the numbers of workers required in each of seven occupational groups. They tend to choose the occupations at the higher end of the scale in which fewer workers are required and which require more ability than our subjects possess. As our subjects grow older they tend to choose more nearly the occupational levels in which workers are most needed. Children do not choose the occupational levels of their parents.
- (2) Desire for work — Our subjects state definitely that they do want to work. Not one of our unemployed or irregularly employed subjects is satisfied to be without employment. The dissatisfaction about being unemployed increases progressively from the "more than half time," to the "less than half time," to the "unemployed" groups. Moreover, our subjects do try many methods to secure employment. The average unemployed youth tries at least four methods.

- (3) Salaries of employed youth — The salaries of the employed seldom exceed \$1,000 per year. The median salary is \$15 to \$18 per week for the regularly employed and \$11 to \$14 per week for the people who are employed less than half time. None of the salaries obtained are high enough to support a family at a reasonable subsistence level. But our subjects do, with rare exceptions, like the work that they are doing at the meager salaries they receive. We have interpreted this finding to mean that our subjects were glad to secure jobs of any kind.
- (4) Attitude toward education — Our subjects with rare exceptions express a favorable attitude toward education.
- (5) Attitude toward the social security legislation of the present federal government — A majority of our subjects are in favor of five of the six policies of the present federal government on which they were questioned. The one policy which they dissent from is the government regulation of business.

In summarizing our results we find that very little of significance has been found for the differentiation of employed and unemployed students upon the basis of the characteristics that we have studied. The small differences obtained could not be responsible for the fact that 49 per cent of our subjects were without regular employment. Some of the possible explanations for failure to find differentiating characteristics may be:

- (1) There may not be any significant measurable differences between characteristics of groups of employed and unemployed youth in a period of economic depression — that is, the securing of employment during such periods may be due to the chance factors which are essentially unpredictable.
- (2) The differentiating factors, if there are any, may lie within the individuals who have sought employment,

but they may have escaped measurement by the methods we have utilized and devised in the present investigation. It may be (although it appears unlikely) that our unemployed subjects possess certain personality characteristics or special deficiencies which constitute a handicap when their possessors seek employment. If such were the case, however, it seems unlikely that they would have escaped detection completely in the seventy-four items that we have obtained and examined

- (3) The differentiating factors between employed and unemployed youth may lie without the individual and within his immediate environment but may have escaped detection. The completeness of our investigation again argues that this situation is not likely to have occurred
- (4) Employers, in selecting their employees from the large numbers available, may not base their choices upon factors which we have investigated. The possibility of the influence of what our subjects choose to call "pull" and what economists call "nepotism" in determining who shall be the successful applicant must be considered. In one of our tables (Table 20) we have shown that appeals to friends, relatives, and employers of friends and relatives were made very frequently by our subjects in seeking employment. It may be, then, that our employed subjects had more influential friends and relatives. In the same table, however, we have shown that the employed subjects used the public employment agency significantly more frequently than the unemployed did.

The results of our investigation are negative in the sense that we have found no truly significant improvable characteristics which differentiate our employed, irregularly employed, and unemployed subjects. The results are positive, however, in pointing out that great differences between our groups in char-

acteristics for which we have secured valid information do not exist. It does appear that the employers of youth have not taken the opportunity to *select* the best candidates for the limited number of positions they had to offer, and, consequently, possession of better qualities (so far as we have been able to measure them) does not mean necessarily that their possessors will be selected to fill positions.

Our findings do indicate a need for "guidance" in the broadest use of that term. It appears that it would be more profitable for both youth and employers of youth if there were closer coopération between the teachers and employers of our young people. If youth were to come to employers after a study of self and the occupational world, after a choice based upon the knowledge of the first two, and after a period of education for vocational competence, they would be in a position to offer something that employers would find it difficult to refuse. And if employers, in addition to a knowledge of what the student has to offer, know their own business well enough to know what they want of the applicant's qualifications, know how to look for it, and know enough to fit and re-fit proffered abilities to required tasks, it would appear that they could make better selection among job applicants

APPENDICES

APPENDIX I

EMPLOYMENT QUESTIONNAIRE AND FOLLOW-UP LETTERS

EMPLOYMENT PROBLEMS SURVEY

CAMBRIDGE, MASSACHUSETTS

June 1935

This letter is addressed to a select group of young people in the cities of _____ and _____, Massachusetts.

The purpose of the attached questionnaire is to discover the extent of employment and unemployment among young people in recent years, the present standards of employment as caused by the depression, and the efficiency of our present educational system. We know that economic conditions have so badly disorganized business and industry that obtaining a position after graduating is extremely difficult. However, we have heard that many have been placed in positions

We are anxious, therefore, to find just how those who are employed accomplished it. And from those who are unemployed just what means are being used to secure a position, and under what conditions they would accept work. In this way, we would possess complete facts concerning your problems, and these will be presented to local and United States government authorities in an effort to promote beneficial action in your behalf.

Whether you have a job or not, even though you are attending school or doing something else, please fill out and return the questionnaire. Read each part over carefully first, so you will thoroughly understand it. Checking the answers involves very little effort. Care has been taken to arrange the questions so that almost no writing is required. It has been found that most people complete the answers in only *fifteen minutes*. You may of course spend a longer time if you desire.

The envelope requires no stamp, just drop it in the mail box. A space at the bottom of the last page will be set aside for your name and address. Please mark and return ~~the~~ the questionnaire even though you do not care to sign your name. Any personal information will, in any event, be kept strictly confidential.

We will appreciate your answering the questionnaire immediately and sending it back by return mail so that the findings may be available soon. We hope they will be of help to you in securing positions, in getting better positions and by setting up new educational facilities which will be designed to promote individual development along chosen lines.

A copy of the summary of our findings will be mailed to you as soon as possible after receiving your replies.

Thanking you for your attention and co-operation, I remain

Very truly yours,

W F DEARBORN,

Professor of Education,
Harvard University.

146 SCHOLASTIC BACKGROUNDS OF UNEMPLOYED YOUTH
EMPLOYMENT PROBLEMS SURVEY
CAMBRIDGE, MASSACHUSETTS

July 13, 1935

The response to our questionnaire concerning the employment and educational problems confronting young people today has been very prompt and generous on the whole

In order, however, to have an accurate and adequate summary to present to the federal authorities along with practical suggestions for the solution of these problems of youth, it is necessary that every questionnaire be filled out and returned as soon as possible.

Therefore, if you have not had the opportunity to return yours, please make an effort to do so. Whether you have a job or not, or are attending school or doing something else, the success of our efforts depends on our getting a true and complete picture of present conditions.

The statements merely require checking and practically no writing. No stamp is necessary on the envelope. *It would help us very much if you would sit down for fifteen minutes — right now if you can — fill out the questionnaire, and drop the letter in the mail today.*

Very truly yours,

W F DEARBORN,

Professor of Education,
Harvard University.

P S Kindly disregard this letter if you have already mailed your questionnaire.

OFFICE OF
SUPERINTENDENT OF SCHOOLS
, MASSACHUSETTS

July 25, 1935

It is generally recognized that the widespread conditions of unemployment have particularly affected young people.

In an effort to determine the precise conditions in which our young people find themselves, the Federal Government has authorized the State Department of Public Welfare to conduct a survey under the supervision of experts on these problems from the Harvard faculty.

The response to the questionnaire circulated in this area for the past two weeks has been excellent, but a quick and complete return of all questionnaires is necessary. It is only by the whole-hearted co-operation of all concerned that an accurate and practical summary to present to the federal authorities can be prepared. Something must be done for the young people as regards education and unemployment, and it is the purpose of this study to find out just what is best.

The supervisors of this study have taken great care to reduce the amount of time and effort required to answer the questionnaire. Read it over

thoroughly and you will appreciate that the information will be of great value in solving your problems.

No postage is required on the return envelope which was supplied. Please fill out and return the questionnaire right away.

Very truly yours,

Superintendent of Schools,
, Massachusetts

EMPLOYMENT PROBLEMS SURVEY

CAMBRIDGE, MASSACHUSETTS

July 31, 1935

We have received several requests for additional copies of the questionnaire which was distributed among young people in and during the past few weeks. Evidently some were put aside to be filled out at a more convenient time and eventually became mislaid or lost.

If you have not yet returned your filled-out questionnaire, another copy is enclosed herewith. Please read it and you will notice that great care was used to make answering as easy as possible. A system of check marks practically eliminates any writing on your part.

In order to make our study most useful, it is necessary for us to know about the activities of everyone in the group regardless of what you are now doing. A preliminary study of the questionnaires returned indicates that some very valuable and interesting information will be available when all of you have sent in your questionnaires.

A copy of the most important things we discover from the questionnaires will be mailed you as soon as completed. Of course, the information concerning each individual will be kept strictly confidential.

Please assist us by mailing your filled-out questionnaire right away so that our summary based on the complete returns can be prepared shortly.

We are inclosing an addressed return envelope which requires no postage.

Very truly yours,

W F DEARBORN,
Professor of Education,
Harvard University

EMPLOYMENT PROBLEMS SURVEY

CAMBRIDGE, MASSACHUSETTS

August 6, 1935

This letter is addressed to those young people in and who received questionnaires and have not yet returned them filled out. There are many no doubt who feel that because of their present status in life, it is not necessary to fill out and return these questionnaires.

Some of the questionnaires have been returned with a note explaining that because of the fact that they had a job or that they were married and keeping house, they did not think it necessary to answer the questions. It is from these successful individuals that we are very anxious to hear. Through ability and resourcefulness they have enjoyed some degree of attainment and it is necessary for us to have a knowledge of these details in order to help solve the problems of those who have not been so successful. We would appreciate it, therefore, if you would kindly answer the questions insofar as they concern your present position.

For example, in the first question, if you are a married woman and not seeking employment, you circle number 3, or, if you are still at school, circle number 4. Those who are not seeking employment may skip questions II, V, VI, VII, VIII, IX, X, XI, XII and XIII. This leaves the first, third, fourth, and the last three questions to be answered. Even though you will gain nothing yourself, you will enable us to help those who need it.

To those who are unemployed or seeking a more satisfactory position and have not yet had the opportunity to send in their questionnaires, we ask you once more to do so as soon as possible. Everyone must co-operate if our summary is to be complete, and our suggestions to the government true and practical.

Thanking you for your attention to this matter, and hoping for an immediate return from all of you, I remain

Very truly yours,

W. F. DEARBORN,

Professor of Education,
Harvard University.

P.S. If you have a few minutes to spare, sit down — right now — fill out your questionnaire and mail it in the special envelope provided. No postage is required.

EMPLOYMENT PROBLEMS SURVEY

CAMBRIDGE, MASSACHUSETTS

August 14, 1935

A wine merchant wanted to give a party to his friends, but due to the depression his wine barrel was empty. His friends, realizing his condition, agreed to bring one quart of wine each to the party so that his barrel might be full. The party was a grand success until the time came for the pouring of the wine. The spigot of the wine barrel was opened and gave forth only water. Each friend had brought a quart of water thinking that this small proportion would not be noticed in such a large quantity of wine.

By returning the filled-out questionnaire immediately you are bringing a quart of wine to your party and assuring its success

Very truly yours,

W. F. DEARBORN,

Professor of Education,
Harvard University

EMPLOYMENT PROBLEMS SURVEY

(For the Massachusetts Department of Public Welfare)

June 1935

I *Employment Status*

Draw a circle around the number in front of the statement which best represents your recent circumstances

- 1 I have been employed all the time during the past year
- 2 I have been unemployed all the time during the past year
- 3 I have been at home and not desiring employment during the past year
- 4 I have been attending school during the past year
- 5 I have been employed more than half the time during the past year
- 6 I have been employed some, but less than half the time during the past year

II. *Means Used in Trying to Obtain Employment*

Draw circles around the numbers in front of the statements which give things you did in trying to obtain employment

- 1 I registered at a public employment agency, such as city, county, state, United States Government
- 2 I registered at a private employment agency, one at which a fee is charged
- 3 I answered help wanted newspaper advertisements
- 4 I filled out work applications at stores and industrial organizations
- 5 Members of my immediate family who are working tried to help me to get work where they are working
- 6 Members of my immediate family tried to get me placed through friends of theirs
- 7 I appealed to my relatives to help me get a position
- 8 I appealed to my friends to help me get a position
- 9 I appealed to the school authorities to help me get a position.

III *Schooling*

Draw a circle around the number which represents the last school-grades you attended

<i>Elementary</i>	<i>Junior High</i>	<i>Senior High</i>	<i>College</i>	<i>Special School</i>
1 2 3 4 5 6	7 8 9	10 11 12	I II III IV	I II III IV

Write the names of the schools you attended on the lines below
Elementary Junior High Senior High College Special School

IV *Occupational Training (for both employed and unemployed)*

Draw circles around the numbers in front of the occupations for which you are trained, and also mark an X on the number of the one of these for which you are best suited.

1. Clerk, including stenographer or general office worker.
2. Store clerk, salesman, saleswoman, etc
3. Automotive repair work, including machinist, garage helper, machine and motor repair and service work, mechanic, and toolmaker.
4. Domestic, any kind of household work, such as children's nurse, governess, cook, etc
5. Agricultural work, farmer's helper, forestry, etc.
6. Printing and its allied work of engraving, photography, etc.
7. Electrical work, technical maintenance, service or repair work.
8. Dressmaking.
9. Hairdressing, beautician, masseuse, etc.
10. Carpentry and industrial painting.
11. Commercial art and writing.
- 12.

(If you are trained for any occupation not listed above, circle 12 and write the name of the occupation on the blank following)
 Be sure you have marked an X on the occupation for which you are best suited.

V. *Future Occupational Plans*

Draw a circle around the number in front of the statement which expresses most closely your future plans

What do you believe your occupation will be five years from today?

1. Day laborers of all classes. — laborer, longshoreman, cleaner, farm laborer, manufacturing operator, factory machine operator, etc
2. Slightly skilled trades — miner, elevator tender, servant, janitor, delivery man, sailor, soldier, etc.
3. Semiskilled, minor clerical, and minor business — chauffeur, barber, fireman, policeman, store clerk, retail dealers (in groceries, meats, milk, confectionery), telephone operator, tailor, waiter, salesman, shoemaker, mechanic, toolmaker, etc
4. Farming — farmer, florist, gardener, poultry raiser, etc
5. Clerical, skilled trades, retail business — bookkeeper, transportation inspector, carpenter, electrician, foreman, retail dealer (in automobiles, furniture, produce, clothing), plumber, etc
6. Semiprofessional — musician, transportation official, managerial position, proprietor, captain, pilot, business executive, etc.

7. Professional — architect, artist, clergyman, engineer, doctor, dentist, lawyer, teacher, etc
(If unemployed it will not be necessary to fill out Numbers VI, VII, VIII, IX, X, XI Turn to Number XII, Page 6.)

VI *Means Used in Obtaining Employment (for those employed)*

Draw a circle around the number in front of the statement which expresses the method you used in securing employment

- 1 I registered at a public employment agency, such as city, county, state, United States Government
- 2 I registered at a private employment agency, one at which a fee is charged
- 3 I answered help wanted newspaper advertisements
- 4 I filled out work applications at stores and industrial organizations.
- 5 Members of my immediate family who are working tried to help me to get work where they are working
- 6 Members of my immediate family tried to get me placed through friends of theirs
- 7 I appealed to my relatives to help me get a position.
- 8 I appealed to my friends to help me get a position
- 9 I appealed to the school authorities to help me get a position.

VII *Present Position (for those employed)*

Fill in blank spaces as required

- 1 What is your present position?
- 2 What type of work are you doing?
- 3 What is the address of the place where you are working?

VIII *Employment Experience (for those who are employed)*

Draw circles around the numbers in front of the statements that describe your experience.

- 1 My salary has been reduced more than 25 per cent since I became employed
- 2 My salary has been reduced between 10 and 25 per cent during this period
3. My salary has been reduced less than 10 per cent during this period
- 4 I have changed to work which I do not like as well during this period
5. I have received no advancement since I became employed
- 6 My salary has not been changed since beginning work in this position
7. I have changed to work which I like better during this period
8. I have been promoted since I became employed
- 9 My salary has been increased less than 10 per cent during this period

IX *Salary Level (for those who are employed)*

Draw a circle around the number in front of the statement which best represents your present salary

My salary or income from my work is

- 1 \$6 per week or less
- 2 \$7 to \$10 per week
- 3 \$11 to \$14 per week
- 4 \$15 to \$18 per week.
- 5 \$19 to \$21 per week
- 6 \$22 to \$25 per week
- 7 \$25 to \$30 per week
- 8 \$30 per week or more.

Circle the numbers in front of the following statements if true

- 9 In addition to the salary marked above, my employer gives me meals
- 10 In addition to the salary marked above, my employer gives me a room

X *Lowest Acceptable Salary to Change Your Position (for those employed)*

Draw a circle around the number in front of the statement that represents the smallest salary for which you would change

- 1 For salary of \$6 to \$8 per week
- 2 For salary of \$9 to \$11 per week
- 3 For salary of \$12 to \$14 per week
- 4 For salary of \$15 to \$17 per week
- 5 For salary of \$18 to \$20 per week
- 6 For salary of \$21 to \$24 per week
- 7 For salary of \$25 to \$30 per week.
- 8 For salary of \$30 or over
- 9 I would make a change without securing an increase

XI *Towards Employment (to be answered by persons now employed)*

Below each statement are five choices — (1) Strongly agree; (2) Agree, (3) Undecided, (4) Disagree, (5) Strongly disagree Underline the word underneath each statement that best expresses your opinion

- 1 I like this work better than any other I can think of.
Strongly agree Agree Undecided Disagree Strongly disagree
- 2 I really enjoy doing this work.
Strongly agree Agree Undecided Disagree Strongly disagree
3. This job has several very decided advantages over most other jobs
Strongly agree Agree Undecided Disagree Strongly disagree
4. This work has its merits
Strongly agree Agree Undecided Disagree Strongly disagree
- 5 This work seems to be satisfactory
Strongly agree Agree Undecided Disagree Strongly disagree

- 6 My likes and dislikes for this work about balance one another
 Strongly agree Agree Undecided Disagree Strongly disagree
- 7 This work would be all right if it were not for a few disagreeable things
 Strongly agree Agree Undecided Disagree Strongly disagree
- 8 Quite a number of things about this job annoy me
 Strongly agree Agree Undecided Disagree Strongly disagree
- 9 There are too many undesirable qualities about this work
 Strongly agree Agree Undecided Disagree Strongly disagree
- 10 The less I see of this job the better I like it
 Strongly agree Agree Undecided Disagree Strongly disagree
- 11 I have a feeling of hatred for this job
 Strongly agree Agree Undecided Disagree Strongly disagree
 (If employed it will not be necessary to fill out numbers XII or XIII Turn to Number XIV)

XII *Lowest Acceptable Salary (for those who are unemployed)*

Draw a circle around the number in front of the statement that represents the smallest salary for which you would work

- 1 \$6 a week or less
- 2 \$7 to \$8 per week
- 3 \$9 to \$11 per week
- 4 \$12 to \$14 per week
- 5 \$15 to \$17 per week
- 6 \$18 to \$20 per week
- 7 \$21 to \$24 per week
- 8 \$25 to \$30 per week
- 9 \$30 or over

XIII *Towards Unemployment (to be answered by persons now unemployed)*

Below each statement are five choices — (1) Strongly agree, (2) Agree, (3) Undecided, (4) Disagree, (5) Strongly disagree Underline the word underneath each statement that best expresses your opinion

- 1 I am perfectly satisfied to be unemployed
 Strongly agree Agree Undecided Disagree Strongly disagree
- 2 I do not mind being unemployed
 Strongly agree Agree Undecided Disagree Strongly disagree
- 3 It is rather monotonous not to have a regular position
 Strongly agree Agree Undecided Disagree Strongly disagree
- 4 I wish I could get a position so that I could start working myself up in an occupation
 Strongly agree Agree Undecided Disagree Strongly disagree
- 5 It is aggravating to realize I cannot get employment
 Strongly agree Agree Undecided Disagree Strongly disagree
- 6 I am unhappy about being unemployed
 Strongly agree Agree Undecided Disagree Strongly disagree

7. I am very dissatisfied with having to remain unemployed
 Strongly agree Agree Undecided Disagree Strongly disagree
- 8 I am thoroughly disgusted at not being able to get a position
 Strongly agree Agree Undecided Disagree Strongly disagree
- 9 It is extremely unjust and unfair to me to keep me unemployed
 Strongly agree Agree Undecided Disagree Strongly disagree

XIV *Previous Training*

(a) Practical Value

Draw a circle around the number in front of the subject of most value to you

- | | |
|---------------------|--|
| 1. English | 7 Domestic Science. |
| 2 History | 8 Art and Commercial Art |
| 3 Languages | 9 Office Practice, Shorthand,
Typewriting |
| 4 Mathematics | 10 Music |
| 5 Science | 11 Trade School Courses |
| 6. Manual Training. | 12 |

Circle the above number 12 if the subject of most value to you is not listed above, and write out the name of the subject on the line.

(b) Enjoyment

Draw a circle around the number in front of the subject you enjoyed most

- | | |
|-------------------|---|
| 1. English | 7 Domestic Science |
| 2 History. | 8 Art and Commercial Art |
| 3. Languages | 9 Office Practice, Shorthand,
Typewriting. |
| 4 Mathematics | 10. Music. |
| 5 Science | 11 Trade School Courses. |
| 6 Manual Training | 12. |

Circle the above number 12 if the subject you enjoyed most is not listed above, and write the name of the subject on the line

(c) Present Interest

Draw a circle around the number in front of the subject you would prefer to study now if you had a chance

- | | |
|--------------------|---|
| 1 English | 7. Domestic Science |
| 2. History | 8 Art and Commercial Art. |
| 3 Languages. | 9 Office Practice, Shorthand,
Typewriting. |
| 4 Mathematics | 10. Music. |
| 5 Science. | 11. Trade School Courses |
| 6. Manual Training | 12. |

Circle the above number 12 if the subject you would prefer to study is not listed above and write out the name of the subject on the line.

XV *Existing Conditions*

Below each statement are five choices — (1) Strongly agree, (2) Agree, (3) Undecided, (4) Disagree, (5) Strongly disagree. Underline the word underneath each statement that best expresses your opinion.

1. Young people today have a better opportunity to get ahead in the world now than they did ten years ago.
Strongly agree Agree Undecided Disagree Strongly disagree
2. The depression has greatly retarded the progress of youth.
Strongly agree Agree Undecided Disagree Strongly disagree
3. It will be a long time before things get better.
Strongly agree Agree Undecided Disagree Strongly disagree
4. Hard conscientious work will be rewarded with an increase in salary and promotion.
Strongly agree Agree Undecided Disagree Strongly disagree
5. The government should provide jobs for all young people who are unable to find other work.
Strongly agree Agree Undecided Disagree Strongly disagree
6. The CCC camp is a good thing, and more people should be allowed to enroll.
Strongly agree Agree Undecided Disagree Strongly disagree
7. Young people would be better off and have more jobs if the government reduced taxes and did not try to regulate business.
Strongly agree Agree Undecided Disagree Strongly disagree
8. Unemployment insurance should be provided for everyone.
Strongly agree Agree Undecided Disagree Strongly disagree
9. The government should not make individuals help provide pensions for old people.
Strongly agree Agree Undecided Disagree Strongly disagree

XVI. *Education*

Below each statement are five choices — (1) Strongly agree; (2) Agree, (3) Undecided, (4) Disagree, (5) Strongly disagree. Underline the word underneath each statement that expresses your opinion.

1. Going to school is a waste of time.
Strongly agree Agree Undecided Disagree Strongly disagree
2. School may be all right for some, but it has been of no value to me.
Strongly agree Agree Undecided Disagree Strongly disagree
3. Reading, writing, and arithmetic are the only things school gave me that are of any importance to me.
Strongly agree Agree Undecided Disagree Strongly disagree
4. Six grades of schooling would have been plenty for me.
Strongly agree Agree Undecided Disagree Strongly disagree
5. Very few people should be given any schooling beyond the ninth grade.
Strongly agree Agree Undecided Disagree Strongly disagree

- 6 Everyone should go to school at least twelve years or graduate from high school
Strongly agree Agree Undecided Disagree Strongly disagree
- 7 Everyone should be allowed to take as much post-graduate work as he wished.
Strongly agree Agree Undecided Disagree Strongly disagree
- 8 The schools should enable everyone to have two years advanced training, either in college or in a special training school
Strongly agree Agree Undecided Disagree Strongly disagree
- 9 I think everyone should receive some school training and supervision until he is twenty-five years old
Strongly agree Agree Undecided Disagree Strongly disagree

Name

Address

Please write any comments you wish to make about your personal experiences or opinions in the space below

APPENDIX II

EMPLOYMENT WHICH THE SUBJECTS OF THE EXPERIMENTAL GROUP HAVE FOUND

(a) Boys Employed Full Time at Following Occupations

Apprentice	1	Cook	1
Assistant manager	2	Decorator (interior)	1
Athletic dealer	1	Delivery man	1
Attendant		Dye-maker	1
Nurse	1	Electrician	1
Station	4	Embosser	1
Baker (bread)	2	Errand boy	1
Bank teller	1	Farm hand	1
Barber	2	F.E.R.A. — CCC	11
Bus boy	1	Foreman (warehouse)	1
Chauffeur	1	General work	1
Checker	1	Greenhouse helper	1
Clerk		Heel stainer	1
Grocery	6	Iceman	1
Hardware	1	Laborer	1
Store	5	Laundry owner	1
Unspecified	10	Leather worker	1
Coast guard	1	Lumper	1
Collector	1	Machinist helper	2
Compositor	1	Manager	3

Meat cutter	1	Printer	2
Mechanic	1	Printer's devil	1
Messenger	4	Proofreader	1
Musician	1	Salesman (cigar)	1
Newsboy	1	Seaman	1
Office boy	1	Shipper	2
Operator		Shoe modeler	1
Elevator	2	Shoe worker	1
Machine	3	Shop helper	1
Moving picture	1	Spring maker	1
Wireless	1	Stevedore	1
Packer (laundry)	2	Stripper	1
Painter	1	Ticket taker	1
Pipe fitter	1	Toolmaker	2
Plumber	1	Truck driver	6
Press feeder	1	Waiter	1

(b) Boys Employed More Than Half Time at Following Occupations

Antique dealer	1	Librarian	1
Apprentice (machine)	1	Longshoreman	1
Assistant		Machinist	1
Accountant	1	Mechanic	1
Printer	1	Messenger	3
Attendant (station)	1	Musician	2
Bookkeeper	1	Newsboy	1
Car cleaner	1	Operator (machine)	1
Clerk		Pin boy	1
Grocery	1	Sailor	1
Store	1	Salesman	
Unspecified	3	Unspecified	2
Contractor	1	Shoe	1
Dye-maker	1	Slitter (paper)	1
Dish washer	1	Spotter	1
F E R A — CCC	11	Stripper	1
Helper		Truck driver	3
Painter	1	Usher	1
Plumber	1	Worker	
Roofer	1	Factory	2
Iceman	2	Sheet metal	1
Laborer	6		

(c) Boys Employed Less Than Half Time at Following Occupations

Advertising distributor	1	Attendant	
Assistant		Station	1
Machinist	1	Gas garage	1
Manager	1	Bookkeeper	1

Box maker	1	Helper	
Bus boy	1	General	1
Canvasser	1	Press room	1
Carpenter's apprentice	1	Iceman	1
Chauffeur	2	Laborer	4
Clerk		Longshoreman	1
Counter	1	Mechanic	2
Grocery	4	Office boy	1
Railroad	1	Operator (light)	1
Soda	1	Packer	2
Stock	1	Painter (sign)	1
Stove	1	Paper boy	1
Unspecified	2	Poultry dresser	1
Clothes checker	1	Press feeder	1
Conductor	1	Salesman	
Distributor	2	Candy	1
Farmer	1	Unspecified	2
F E R A — CCC	13	Truck driver	1
Furnier	1	Worker	
Freight loader	1	Dock	1
Gym teacher	1	Factory	2
		Kitchen	1
		Sheet metal	1

(d) Girls Employed Full Time at Following Occupations

Assistant		F E R A. — book repairer	1
Dentist's	1	Haardresser	3
Doctor's	1	Helper (mother's)	1
Attendant	1	Ironer	1
Bakery (paper pans)	1	Inspector	
Bookkeeper	1	Film	1
Bundle girl	1	Shoe	1
Cashier	1	Librarian	1
Checker	1	Maid	2
Clerk		Musician	1
Billing	1	Operator	
Grocery	1	Clothes presser	2
Hosiery	1	Machine	4
Insurance	1	Sausage	1
Soda	1	Sewing machine	1
Wholesale	1	Switchboard	2
Unspecified	8	Telephone	2
Cook	1	Packer	
Counter girl	1	Cookie	1
Dressmaker-stitcher	1	Meat	2
Examiner (underwear)	1	Unspecified	2

Repairer (shoe)	2	Waitress	5
Saleswoman	7	Worker	
Secretary	4	Sample (order)	1
Sewing (clothing)	4	Wrapper (cake)	1
Stenographer	12		

(e) Girls Employed More Than Half Time at Following Occupations

Actress	1	Maker	
Apprentice (furs)	1	Cigar	1
Bookkeeper	1	Sausage	1
Buyer (assistant)	1	Model	1
Cashier	1	Nurse (tenant)	1
Checker	1	Packer	
Clerk		Shoe	1
Bank	1	Unspecified	3
Office	3	Pinner (temple frames)	1
Sales	4	Presser (dress)	1
Store	1	Secretary	1
Unspecified	2	Stenographer	5
F E R.A	3	Stitcher	1
Hairdresser	2	Storekeeper	1
Housewife	1	Waitress	2
Machinist	2	Worker	
Maid	3	Cord	1
Mailer	1	Factory	1
		Laundry	1
		Shoe	2

(f) Girls Employed Less Than Half Time at Following Occupations

Attendant (nurse)	1	Housewife	1
Beautician	2	Lacer	1
Bottle labeler	1	Laundry	
Cashier	1	Ironer	1
Clerks		Worker	2
Adjustment	1	Machine looper	1
Filing	1	Maker	
Office	1	Neckwear	1
Soda	1	Shoe	3
Copyholder	1	Operator	
Dipper	1	Switchboard	1
Dressmaker	1	Telegraph	1
Dress sewer	1	Packer	
F.E.R.A.	1	Laundry	1
Harddresser	2	Tea ball	1
Helper		Presser	
Cook's	1	Clothes	4
Mother's	4	Photo finisher	1

QUESTIONNAIRE ON EXTRACURRICULAR ACTIVITIES

	Junior High School						Home Room	.. ..
Name . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Grade	. . . . .
Birthday . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Date	. . . . .

Please mark with an X activities for each year you have been in Junior High School

	7th	8th	9th
Home Room President			
Home Room Vice-President			
Home Room Secretary			
Home Room Traffic Rep			
Home Room Caretaker			
Glee Club			
Orchestra			Office, if any? . . .
Dancing Club			Office, if any? . . .
Art Club			Office, if any? . . .
Physical Training Club			Office, if any? . . .
Boys' Leaders Club			Office, if any? . . .
Leather Club			Office, if any? . . .
Sewing Club			Office, if any? . . .
Knitting Club			Office, if any? . . .
Lamp Shade Club			Office, if any? . . .
Dramatic Club			Office, if any? . . .
Guidance Club			Office, if any? . . .
Shop Club			Office, if any? . . .
Basketball			
Baseball			
Soccer			
Volley Ball			

Indicate here any activities of the school in which you have taken part which we may have omitted

Have you taken part in assemblies? Never Occasionally Frequently
(Please underline the proper word)

Do you belong to any of the following organizations

Boy Scouts ☐ Girl Scouts ☐ Camp Fire ☐ Y M C A ☐
Boys Club ☐ Church Clubs ☐ Girls ☐ Y W C A ☐

(Indicate here any other organizations to which you may belong which we have omitted)

Do you take music lessons? What instrument?

Do you take vocal lessons? Dancing? Elocution?

Are you studying anything outside of school? If so, what?

. Do you work outside of school for pay?

What kind of work have you done or what kind of work are you doing?

.

What hobbies have you?

.

List the three subjects in Junior High School you like best in order of your preference. 1 2. 3

Do you intend to go to high school? Trade School?

Art School? Normal School? Business College?

College?

List in order of preference the three occupations you would like to follow when you finish school 1 2 3

APPENDIX IV

SAMPLE LETTERS WRITTEN BY MEMBERS OF THE EXPERIMENTAL GROUP WHEN REPLYING TO THE QUESTIONNAIRE ON EMPLOYMENT

*Sample letters from boys who had been unemployed all the past year **

"I have been employed for the past four summers at various kinds of employment I have worked for the , an errand boy for a vegetable team, a clerk at a refreshment stand, a dish-washer in , a Laborer, and a Time-Keeper.

My wages have varied from \$5 00 a week to my present salary of \$20 00 a week I have enjoyed all of my work because of the experience that I have gained from it, but I would not want this work as a permanent work during my stay in this world

I have gained all my positions through my Father's connections "

"I graduated from High School and have had no more than eight months work since It has been very discouraging, especially as I wish to make something of myself My ambition has been, and still is, to be a mis-

* All original constructions and spellings have been retained

sionary-scientist. These past few years have made it mighty hard for we young people to keep up our morale—I thank God that I have been able to do so

Personally, these last three years have not been unfruitful I have read, studied, and gained a rather liberal education for myself All summer I have been studying for college entrance exams and if I can raise seventy dollars by the middle of September I will enter College School of Religion It is my hope to see the realization of my long delayed plans this fall.

If you could, in any way, help me to realize my dreams, I assure you it would not be in vain "

"The government should take all people 65 years of age or over and give them a pension And taking them out of work, giving the younger people a chance for employment With the help of the Government and the young working people a pension would be easier to pay to the old folks

Thus providing for the old folks, and the young people with very little difficulty "

"I am strongly in favor of the government furnishing means for young men and women who really desire a college education, the proper opportunity

Another thing that appeals to me is the opportunity for military training that is offered in the schools

I am also in favor of President Roosevelt's ideas for old age pensions and I am in accordance with Father Coughlin's revisions of the present day banking laws.

I wish to thank all those who have made it possible for me to express a few of my personal opinions."

"I feel that the government should have apprentice factories for people who cannot find work

I was working for a Chain store as a Delivery clerk and was discharged because I was getting too high wages—'\$8 00— 54 hours a week.'

The N.R.A seemed like a lot of hokus to some people (employers) but it surely meant a little extra pleasure for others, (employees)

Too many *Brams* are spoiling the *Country* "

"My first year at college has left me without a cent of the savings that I acquired working on odd jobs since the age of twelve Whether or not I will be able to return to school next year will be determined by the amount of scholarship and loan I receive

From my point of view, a viewpoint that I believe is held by many other students, the Government should aid students to gain a higher education by making loans to them.

Under present conditions, not as many families can afford to send their children to college as could those families of the years ago "

"My opinion concerning the depression is, that all aliens should be deported, thereby making room for a goodly percentage of American Citizens, in jobs now occupied by aliens

This I think would eliminate a large portion of the unemployment problem. I think more should be done in regard to finding employment for young people out of High School and College.

I think and believe they could handle any job to which they were fitted if given a chance "

"I think that business is getting to strict in requiring experience for all jobs under the sun The one and only thing that has held me back in my accounting field is lack of experience I am a graduate of an Accounting School and enrolled in this after leaving High School. I am prepared to do many jobs in my field, I think it unjust to ask us to have experience even before they have given us a chance

If that is always the case we may as well give up hope, because we'll never have experience if someone doesn't give us a start

In some lines of work I can see the necessity but in about 9/10 of the jobs I think it most unfair to the younger generation."

"I believe conditions are picking up slowly, and that in a year or more there will be definite progress towards prosperity

Although I have little in view at present, I believe I will find employment next fall or winter I believe if anyone looks for employment earnestly and sincerely, he will be rewarded with full or part-time work "

"We are all victims of circumstances I might like to follow Diesel Motors but necessity compels me to take the First job and eventually turn out to be a (anything) This has happened to my father and Grandfather A High School Education is a good general preparation but not a signpost to what your vocation will be

If in good circumstances you can be anything you want If in poor circumstances like the majority, you will be a victim of circumstance and wind up as Fate decrees, Butcher, Baker or Candle-Stick-Maker.

All a Good man needs is a Start."

"Out of all the jobs the fellows get around where I live, I don't think one got the job without a pull from someone near the Hiring-Manager."

"Persons without 'Pull' can't secure positions. Scholastic ability can't procure a job.

I received a Magna Cum Laude but it hasn't been of any use thus far Am pleased to know someone is interested in young people.

Hope I've helped a little "

"The system to-day for employment is generally 'Rotten,' clear through. It's not a question of what you know today but it's who you know.

The private agency today is generally grossly unfair and in many cases absolutely crooked. That is not idle talk but understood fact. Another thing that tends to discourage a young fellow with a high school education is when he applies for a position he feels he is capable of filling, what does he find? Simply that for that same job there are college graduates with a couple of degrees. Now frankly, what chance does he stand against that type of competition?

These few points and many others are tending to embitter the youth against our whole social system, and can one blame them? Merit counts for nothing, honest hard work nets a person nothing in a material way except in your larger Companies with a 'worked out' system.

Something must be done and I sincerely hope this survey will bring those beneficial results."

"I have had a lot of experiences I think. I have spent more for carfare to look for a job than I made as long as I worked. If I made \$50.00 working then I spent \$60.00 looking for work. I am one of the boys in the family that love school, I was sorry to stop School but it was necessary because I was the only one that could look for work to help the family out. I went to work for \$17.00 a week. I work one month then the hard times start to hit me. I was looking for a job so long that I don't know what to do. Sometime I think I go out and make money.

One thing I like to say is don't blame the fellow in jail for going out and robbing because a lot of fellows must support their homes.

If you can't get work, you must go out to get money."

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